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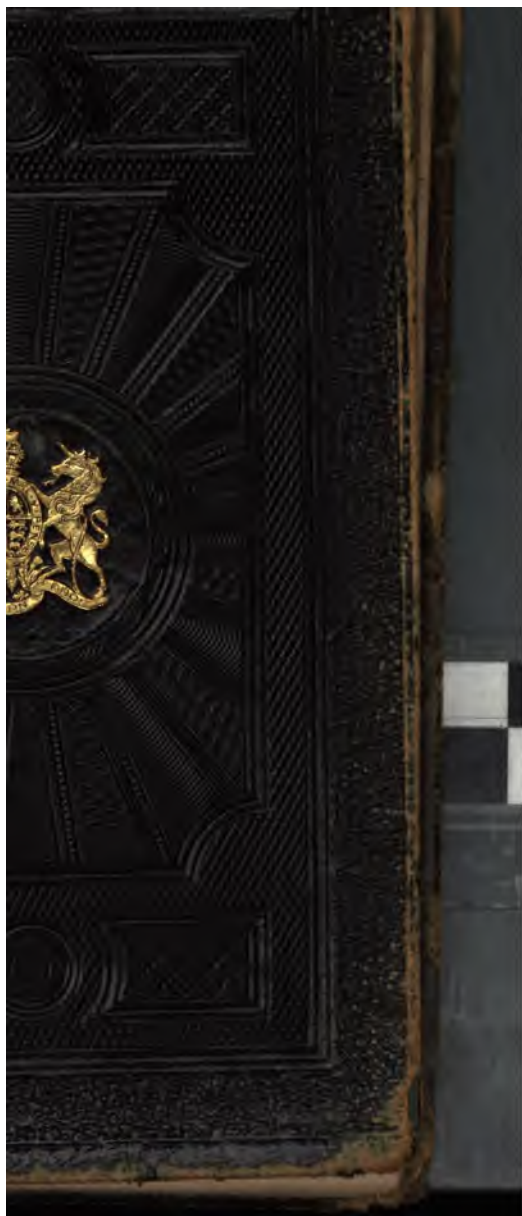
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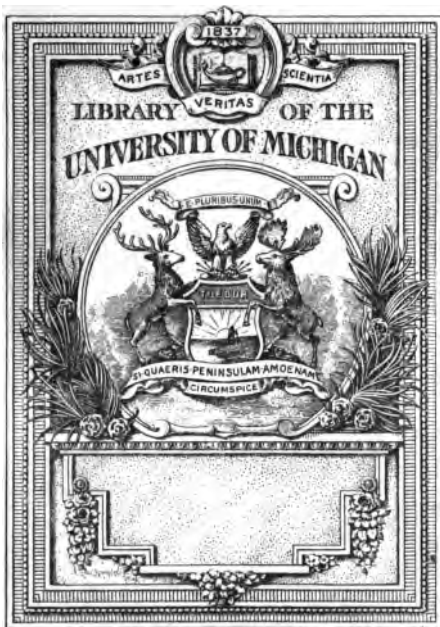
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HISTORICAL AND STATISTICAL ACCOUNT

OF

NEW-BRUNSWICK, B.N.A.

WITH

ADVICE TO EMIGRANTS.

BY

**The Rev. W. Christopher Atkinson, A.M.,**  
PASTOR OF THE PRESBYTERIAN CHURCH, MASSEEN, ST GEORGE'S.

THIRD EDITION, GREATLY IMPROVED AND CORRECTED.

“Καὶ ἀποκριθεὶς ὁ βασιλεὺς, ἔειπεν αὐτοῖς· Ἀμὴν λέγω ὑμῖν, ἐφ’ ὅσον ἰποιήσατε ἐν  
τούτων τῶν ἀδελφῶν μου τῶν ἐλαχίστων ἐμοὶ ἰποιήσατε.”—MATTH. XXV. 40.

“Porro ne benefaciendo segnescamus : tempore enim suo metemur, si non  
frangamur animo.”—GAL. VI. IX.

*Here is information, both accurate and honest !*

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EDINBURGH:  
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## P R E F A C E.

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WERE it not that a Preface is considered by many persons an indispensable accompaniment to a work, the Author would prefer laying it before the world without one; but to omit complying with general custom, might seem to indicate indifference to public opinion.

The history of every country in Europe commences in the region of fable. At what period they were severally discovered, and by whom settled, is equally uncertain, and the accounts which are given of the early ages of all, are, at best, but plausible conjectures. The situation of America is, in this respect, just the reverse; the discovery of this immense Continent, is an event of modern occurrence, and was accompanied by the infant art of printing, which, by multiplying the copies, preserved the journals of those who explored and settled the New World.

But if the materials of American history are *unlike those of Europe*, the events are more



different,—the progress of man from a state of nature towards civilization, is always slow, and generally similar. But the operation of an enlightened people upon uncultivated nature, which was first displayed in the new settlement of America, affords a most interesting subject of contemplation. The portion of American history, filled by New-Brunswick, though small, is not altogether unimportant, and as one of the minor links in the great chain of events, cannot, with propriety, be omitted.

The favourable prospects which have been presented to our American dependencies, have been materially improved by the final settlement of the “Boundary Question,” with the United States. The Americans have for some time ardently desired to possess the right to the navigation of the St John, and to add the fine fertile Province of New-Brunswick to their possessions, being fully aware of the value of that river, as a means of internal communication, and foreseeing that the city of St John, which is situated at its mouth, is likely, from the advantages of its position, to rival, at some distant period, the city of New York in commercial importance.

*The St John* is one of those noble streams *by which America is intersected, and by which*

that continent is rendered so admirably adapted for the abode of an enterprising and trading people. By the articles of the treaty, not only is the navigation of the St John and its tributaries thrown open to the Americans, but the timber and agricultural produce grown upon their banks, although within the American Boundary, are admitted into the colonies free of duty, and, consequently, into the Mother Country, on the same terms as those of colonial growth.

These privileges cannot fail to prove a great commercial boon to the colony of New-Brunswick, and to work an important change in the trade of the more inland districts of the country; for unless human nature, and the American character in particular, suffer an extraordinary change, they will be made subservient to the transmission not only of the productions of all the neighbouring States into the colonies, and from thence to the home market, but also of supplying these districts with British goods, free of those high protecting duties, by means of which, the Americans are now endeavouring to foster their home manufactures; because, undoubtedly, no fiscal arrangements will suffice to guard the two countries against illicit trading under the present treaty. The St John being


necessarily the channel of this traffic, a very cursory review of the commercial history of the world will be sufficient to shew the powerful influence such a transit trade is calculated to have in spreading wealth over the country through which it flows. And this review will be valuable, if it shall have the effect of directing the attention of our emigrant capitalists to the prospects and capabilities of our North American provinces, and of inducing them to join, and to avail themselves of the current of emigration of the labouring classes, which is annually flowing into New-Brunswick, and which, owing to the want of capital in the colony, is at the present turned to so little account.

In directing the attention of the capitalist emigrant to the capabilities of New-Brunswick, it is important that we should now turn our attention to those points which involve the happiness and comfort of individuals, as these are matters of the deepest moment to those of the middle ranks who are induced, by the hope of gain, or the force of circumstances, to seek a home in the Colonies.

This Province lies parallel with some of the *finest countries* of Europe; it enjoys a *salubrious climate*, to which the length of the win-

ter is the only alloy—although this is not admitted to be a draw-back by those who have enjoyed the pure air, and brilliant sun-shine of an American winter. But even with respect to the severity of the winter, the clearings in the backwoods are making a rapid improvement in the seasons ; and it may be reasonably supposed therefore, that as the country becomes settled, and as agricultural improvement advances, the climate will be ameliorated, and the winter rendered much milder, and of shorter duration. The external aspect of a country has no inconsiderable influence in promoting the happiness of its inhabitants, particularly of those of the better classes. In this respect, the colony of which an accurate account will be given in this Work, possesses eminent advantages.

The scenery on the river St John, is not to be surpassed in beauty by any thing to be found in North America, and although the banks of this noble stream are already settled, and under partial cultivation for near a hundred miles above its mouth, allotments are still to be purchased in these districts on moderate terms, while there remains unallotted, immense tracks of fine country, lying along the upper course of the parent stream, and the banks of its num



rous tributaries. These districts embrace the magnificent scenery of the Grand Falls.

The emigrant to New-Brunswick is not exposed to those privations or dangers, as those who emigrate to New Zealand or Australia. A few days sail brings him to the colony, and his further progress is facilitated by water carriage, through the numerous rivers that intersect the country. Having arrived at his destination, the agricultural capitalist will find himself safe both in person and property; and from the crowds of individuals from Ireland, he will possess the means of carrying on his farming operations without interruption, and at a moderate expense. This is an advantage of the greatest importance even in the old countries of Europe; but its value is infinitely greater in new colonies, where the want of labour has proved the great obstacle to agricultural improvement, and consequently, to colonial prosperity.

Whilst it is very desirable that the capabilities of our fine possessions, in North America, should be brought under the notice of the public, it is imperative, at the same time, to guard against the grievous error which has been committed by those who, over eager to promote *the prosperity of particular colonies*, have been

the means of hurrying thousands of their fellow-countrymen into hopeless exile. Let no one suppose that there is at the present day a "royal road to wealth and independence;" on the contrary, the emigrant must be prepared to exert great industry and self-denial, and all that can be justly promised is, that the practice of those virtues will more likely be rewarded with success in the colonies, than at home, for not only is the competition between man and man less severe, but the scarcity of capital renders a sum of money which would be wholly inadequate to pave the way to success in the Parent country, sufficient to lay the foundation of independence, and even of wealth in America.

Of the many extraordinary changes which science has brought about in modern times, none has more conduced to the social happiness of mankind, than the more rapid communication between distant places. In this respect, steam-navigation has been of infinite service to our North American possessions; it has brought them nearer to Britain than Edinburgh was to London in the days of our ancestors. This is a circumstance of vital importance in connexion with emigration to New-Brunswick—for not only does the rapidity of intercourse promote commercial enterprise,

it enables the emigrant to fall back upon his resources at home, either for advice or assistance on the occurrence of any sudden emergency.

Nothing, perhaps, is more distressing to those who are leaving their native land, in search of a home in a foreign country, than the thought that they are about to sacrifice all those refinements of society which render life desirable. The length of time which New-Brunswick has been a settled country, (1783) the agricultural pursuits of the people, and the more advanced stage of social improvement to which society has attained, not only preclude any such severe sacrifice, but render the colony peculiarly eligible for the best class of emigrants. Many of the pleasures of civilized life will be found to be within the reach of those possessed even of moderate resources, and not incompatible with the active pursuits by which independence and wealth are to be acquired.

If this attempt to promote emigration, and to point out the natural and political advantages enjoyed by New-Brunswick, shall have the effect of directing the attention of government and capitalists to the capabilities of this fine Province, a movement may be given to colonization on sound principles, which is to be hoped *will tend to arrest the retrograde course our*

commerce has been making of late years, and of putting a stop to the rapid depreciation of property which is bringing ruin upon our most important national interests, and filling our streets with idle, starving, and disaffected people.

The Author of this Work being conscious of having been influenced by the best motives, when determining on publication, and being equally sensible how defective his book must appear to those whose reading has been restricted to works of superior excellence, and whose taste has been formed by the finest models, he conceives that apology is, in the *first* place, unnecessary, and would, no doubt, be in the *second*, unavailing.

The very flattering reception which the two former editions have experienced, from two thousand of the nobility, clergy, professors, merchants, &c. of Scotland, have stimulated the Author to exert himself in bringing forward the present edition. For the purpose of rendering it worthy of public approbation, the greater part of the original matter, in the two former editions have been revised, and several new articles introduced, which he trusts will be found highly interesting to the community at large.

To the numerous friends who have honoured



the Author with their patronage, he desires to return his sincere thanks; at the same time, he begs leave to observe, that in consequence of his being much from home while the Work passed through the press, requests that each Subscriber will kindly overlook any errors, as, no doubt, several orthographical errors have crept in and escaped detection—the result of haste, rather than inattention or design—for this, and other imperfections which may be found in the Work.

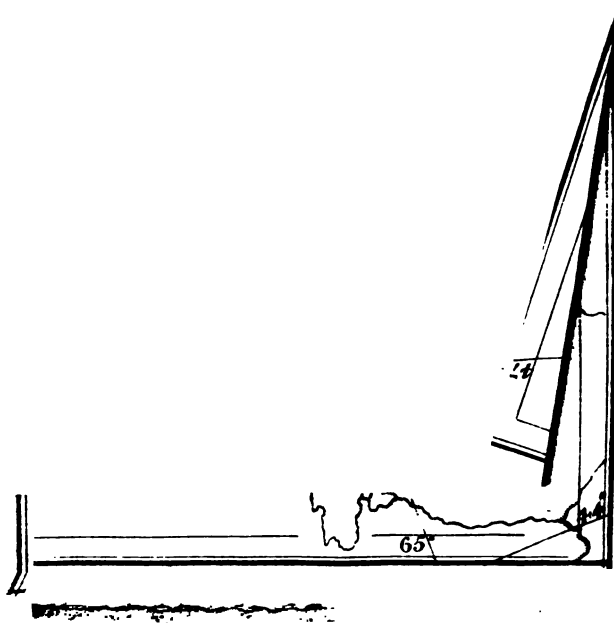
In conclusion, the Author cannot but indulge the hope, that its contents will be disseminated throughout Her Britannic Majesty's dominions; and, should the present unpretending undertaking be deemed worthy of public patronage, as the two former editions, he will be fully satisfied and rewarded for his labours.

HUCUSQUE ADJUVAVIT DEUS!

W. C. ATKINSON.

EDINBURGH, July 1844.





AN ACCOUNT  
OF  
NEW-BRUNSWICK, B.N.A.

WITH DIRECTIONS TO EMIGRANTS.

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CHAPTER I.

The Spirit of Emigration—What the Colony must depend upon for its prosperity—Latitude and Longitude of the Province—Disease—the Climate—its Water—Conveyance—the Extent and Situation of the Great Coal Field—the Sea Coast—the City of St John—by Whom and When it was first Inhabited—its Rise, Progress, Population, Buildings, Churches, Banks, Inhabited Houses, Tides, and of the several Fires that have taken Place in the City—Portland—its Business—Places of Worship—Inhabited Houses—Families and Persons—Carlton, its Bridge, Locality, Trade, Churches, Inhabited Houses, Families, and Acres of Cleared Land—Lancaster, its Mills, Inhabitants, Acres of Cleared Ground, &c.

At a period when the Queen's government, in pursuance of a wise and liberal policy, are using every means to encourage emigration to Her Britannic Majesty's possessions abroad, and

thus add to the strength and security of the more distant portions of the British Empire,—it becomes the duty of every well-wisher of his country, and friend of his species, to lay before the public whatever information he may possess in relation to the subject ; and however limited may be his means, to cast his mite into the general treasury of knowledge, and, if possible, aid in directing attention to those portions of these colonies which a settler can occupy with the greatest comfort, and improve to the most advantage.

It seems never to have been intended that man should remain stationery in the place of his nativity. He is not like a tree that cannot be transplanted, his frame having been so constituted, that he cannot bear the heat of the tropics, or the cold of the arctic regions ; and although he is naturally inclined to adopt the gossip's prayer for

“ One long summer's day of indolence and mirth.”

Yet, when his hopes and fears have been properly excited, he is an active and energetic being, and we find him in all ages and countries moving from place to place, and from country to *country*, impelled by necessity, or induced by the

sense of utility, to make the wide world his home, and the men of all nations his brethren.

The object of emigration is threefold :—To relieve the Parent State of its superabundant population ; to increase more rapidly the number of inhabitants in the colonies, and thus to promote their advancement in wealth and importance ; and, *thirdly*, to provide the means of subsistence for those who are anxious to leave the scenes of their earlier years, to secure elsewhere “ a local habitation,” and a more comfortable and happy home. With reference to the first of these objects : So far as the Parent State is concerned, it matters little what fate awaits the venturous emigrant, so long as the land of his nativity is relieved from the incumbrance of his presence ; still, the philanthropist everywhere must feel an interest in the destiny that awaits him ; and a paternal government will watch over his course, and endeavour to direct his uncertain steps to the haven of happiness and repose.

The colony, however, whose prosperous condition must chiefly depend upon the possession of an intelligent agricultural population, is deeply interested in securing some portion of that industrial wealth, which is continually extending itself towards the American Continent ; and it

therefore becomes an object of importance, that information should be widely disseminated as to the capability of each of those possessions, to contribute to the promotion of the general good ; and to the emigrant himself, it is of vital consequence that he should become acquainted with that colonial possession which, other advantages being equal, is nearest in proximity to the British Isles.

Almost all the moral and industrious emigrants to this Province, whatever have been their occupations, have succeeded in securing to themselves a competency, and many have obtained wealth. The lower class of labourers, when they have devoted themselves to steady habits and industry, have been successful ; (of this I have been an eye-witness, when I visited the several settlements which was under my ministerial charge—the district over which I had to ride every month being upwards of 160 miles,) and where there are instances to the contrary, they may generally be attributed to idleness and intemperance. The inquiry made by persons in the Mother Country, who are desirous to settle in New Brunswick, is, what employment will they find there? And when they are informed that the principal occupation *of the inhabitants* is lumbering in the dense

forests, amidst the deep snows of winter, they have no desire to venture upon a pursuit with which they are altogether unacquainted. Thousands of emigrants, after they have landed in the Provinces, embark for the United States, where a greater variety of employment in mining, manufacturing, and other divisions of labour, afford them an opportunity of choosing that kind which is most congenial to their former habits. It is in vain to ask the miner, or manufacturer, to settle in a country where his branch of business is not known, and to which the productions of his art are exported.

It is by offering encouragement to the different trades and occupations of the Mother Country—by unlocking the available natural treasures of the Provinces—the objects from which their labour will yield them profit and a competency—by directing them to the natural wealth contained in the earth, the soil, and the forest, that they will be disposed to emigrate, and to open and improve those resources that abound in almost every section of the country.

It has been too frequently supposed, that countries abounding in mines, are unfavourable to agriculture: but such an opinion is extremely erroneous; for, although the soil in the immediate neighbourhood of metallic veins is often



unproductive, those veins are not of so frequent occurrence, or so extensive, as to affect the fertility of any considerable tract.

In proof of this, it is only necessary to refer to Great Britain, whose mineral productions have been the great source of her wealth. It is equally certain, that New-Brunswick, almost equal in extent to England, is not only capable of being rendered a mining, but also an agricultural Province. At the present period, the great supply for exportation from the Province, is derived almost altogether from the forests, which are yearly declining before the axe of the lumber-man, and every other division of labour suffers from those pursuits, that scarcely render the shippers of timber a profit.

The pioneers who first visited the forests, remote from any dwelling, and discovered groves of timber that once overshadowed the soil, conferred a favour upon their successors, and secured for a time a revenue to the Province; so will those who, by their foresight, may be the means of bringing into operation other and more permanent objects of enterprise. The most important of all the resources of the Province, are her mines and mineral productions.

New-Brunswick, of which I am about to treat, extends from its south-west point on the

Island of Grand Manaan, at the entrance of the Bay of Fundy, in lat. 44-40, lon. 67-10 to the 48th deg. of north latitude; and is bounded southerly by that bay, and an isthmus of fifteen miles in width, which separates the Bay of Fundy from the Bay of Verte on the eastern coast, where is the termination of its southern line in lat. 46, long 64. Its eastern limit extends northwardly along the Northumberland Straits and Gulf of St Lawrence, till it strikes the Island of Shippegan, at the south entrance of the Bay of Chaleur, in lat. 48, long. 67; and it is bounded to the northward and westward by Lower Canada, and to the westward by the River St Croix; and a line runs from its source to the high lands that extend to the head of Connecticut River, United States.

The steady increase, and growing prosperity of this noble colony, are but little known abroad, and the people of England have yet to learn that a Province, nearly as extensive as all England, watered by noble rivers, whose fertile alluvial banks team with riches, has within a very few years sprung from comparative insignificance, into one of the most valuable of the British North American possessions. The accessibility of its coasts, particularly on the Bay of Fundy, (the harbour of St. John being open

all the year,) the magnitude and extent of the rivers—the fertility and richness of its virgin soil—the abundance of valuable timber, and the vast amount of mineral wealth, (the largest coal-field in the world being found within its limits) all combine together to render this a most thriving colony.

The people of New-Brunswick are most loyal to their Queen, and truly devoted to British laws and British supremacy. They see enough of the workings of democracy among their neighbours to avoid it as a pestilence, and they cling to the pillar of the British constitution, as the only sure support of true liberty. They clearly see and feel that, under the banner of Old England, the laws are equally administered—that every man is fully protected in his person and property, and that they really and truly enjoy more civil and religious freedom than is possessed by their neighbours, who boast greatly of the superiority of their institutions.

The climate of the Province is not remarkable for the generation of any disease peculiar to itself, but in common with other parts of North America, it disposes to inflammatory acute disorders, owing to the operation of cold upon *the surface of the body*, in checking insensib

perspiration. The liability to disease is increased by the sudden vicissitudes of natural and artificial temperatures, especially during the winter months, when the change from cold air to heated rooms is sudden and excessive. It may, however, be considered as particularly healthy. The summers, although hot, are not characterized by that poisonous decomposition of animal and vegetable matters, which engender pestilential diseases in other countries; and where the constitution has not been injured by exposure or excess, persons usually attain a good old age. The absence of intermittent fevers—the bilious remittent, and yellow fevers, gives this country a decided superiority over most others. The diseases of this Province may, with some exceptions, be classed under two heads, *first*, Those that arise from exposure and fatigue; *secondly*, Those that arise from the bad habits of the people, independent of climate.

New-Brunswick, like every other country having intercourse with various parts of the globe, has its imported disorders, and is capable of generating, independently of importation, some of those epidemics to which early life is liable, and which occur fortunately but once, with some few exceptions, such as measles.

scarlet fever, hooping cough, and chicken pox. Every instance of small pox has hitherto been traced to foreign contagion. The diseases which proceed from the bad habits of the people, are such as follow errors in diet, and imprudence in clothing. Among the former, may be classed the intemperate use of spiritous liquors, and the immense consumption of tea, although habitual inebriety is by no means so common at the present time, is still spreading devastation throughout many parts of the Province, laying the foundation of a great many complaints, and rendering each more dangerous in its nature, and more difficult of management. Many of the chronic diseases which baffle the skill of the physician, originate in this vice. The use of tea three times a-day, as strong and as hot as the stomach can receive it, is not confined to the females, but the workmen of the country participate in it, until their powers of digestion are nearly prostrated, and a train of evils supervene, that destroy their health and comfort. If there be any disease peculiar to this climate, it may be said to be dyspepsia or indigestion, from the use and abuse of tea and ardent spirits,

Everywhere the purest water is abundant—  
*a luxury unknown* in many parts of Upper

Canada ; and it will be perceived that numerous navigable streams intersect the country, offering every facility for the conveyance of produce to market. Its numerous and extensive rivers form, during the winter season, when the intensity of the frost has covered them with ice, level and excellent roads, which are marked off and designated by lines of bushes fixed in the ice by officers whose duty is prescribed by law. The mails from England and Nova Scotia, pass too and from Canada twice a-week, without suffering any interruption from the severity of the season. Throughout the Province, the utmost tranquillity prevails ; and during the four years I was in the Province, no wild beast ever disturbed my peace, or ill-disposed person crossed my path ; and when I have entered the houses of the inhabitants, I have met with an hospitable and most confiding frankness. The utmost toleration everywhere prevails with reference to religion. In fact, the people are not aware how well-off and happy they are.

Many repeat the following lines with pleasure :—

New-Brunswick is our home,  
And Britain's sons are we !  
Our tongue is known in every clime,  
Our flag on every sea !

We will not boast that we alone  
The rights of freedom know ;  
There 's many a land that 's free beside,  
But Britain made it so.  
The thunder of her battle-ships  
Was heard on many a shore ;  
But her healing words of peace are heard  
Above the cannon's roar.

In this Province, there is an extensive COAL FIELD, situated between the primary rocks of the county of Charlotte and King's County, and the Straits of Northumberland. On the Gulf of St Lawrence, only the south and south-east sides of this coal field have yet been explored ; the west, north, and north-east sides still remain to be examined, and its limits, therefore, in the latter directions, yet remain unknown. This coal field extends in a northerly direction to Bathurst, 150 miles, and to Miramichi, 120 miles, and from the latter place along the coast to Shediac, which may be estimated at seventy miles. Until the north-east side of this vast coal tract is explored, it would be impossible to give an accurate account of its area ; but it may for the present be considered equal to 5000 miles. This tract may perhaps be characterized as being the largest coal field ever discovered on the globe. To distinguish it from *the Westmorland* district, and other coal fields

in the British Provinces, it has been designated "The Great New-Brunswick Coal Field." The Province likewise abounds in iron, copper ore, lead ore, rock salt, sand-stone, and limestone, &c.

An account of the several parishes, including all the statistics of each, the details of these and other matters, it is hoped, will make this work highly interesting to all classes, both at home and abroad,—but more especially to those who enter fully into the spirit of emigration, and who are desirous of being in possession of that information before they leave their native land, which may insure them to the full accomplishment of those plans they have in view on their landing.

Possessing the advantages already alluded to, it has long been subject both of surprise and regret, that while the most strenuous efforts have been made to direct the stream of emigration to the Canadas, and other colonies in this hemisphere, the inhabitants of the Mother Country have been left in ignorance of the capabilities of New-Brunswick, and that even when the emigrant has reached her shores, he has been permitted to depart, without exertion being made to render him acquainted with the natural advantages of the country, or to induce



him to remain, and enrich it by his industry and wealth.

This Province is bounded on the west, by the frontier, St Croix, and the American State of Main; on the north by the Canadies; on the east by the Gulf of St Lawrence, and on the south by the Bay of Fundy, and the isthmus at the head of it, connecting Nova Scotia with New-Brunswick. Until the period of American independence, the latter territory formed part of the former Province, being known by the name of the county of Sunbury, but in 1783, it was erected into a separate Province under its present name. In superficial extent, it comprehends about 25,000 square miles of diversified and well-watered country. Its coast is indented with numerous bays and harbours. Its soil is fertile; its climate resembles that of Lower Canada, and it is altogether exempt from the bilious intermittent fever, commonly called fever and ague, which is generally in Upper Canada. The productions of the forests, mines, and fisheries, are its chief articles of export.

The Province in 1840, contained twelve counties, ninety-five parishes, 20,514 inhabited houses, 24,368 families, 156,162 persons, 435,861 acres of cleared land, 18,286 horses,

92,260 neat cattle, 141,053 sheep, and 71,915 swine.

The sea-coast of the Province, like that of Nova Scotia, presents a rugged appearance ; and the scenery around St John, possesses nothing indicative of the fertile regions to which it leads. This city was first inhabited in A.D. 1783, by a band of patriots, who, at the close of the American revolutionary war, abandoned their homes, their friends, and property in the revolted colonies, with a large portion of civilized life, that they might preserve unsullied their loyalty to the British Sovereignty, and breathe the pure air of freedom under the paternal protection of the monarch whom they revered, and guarded by the meteor flag of England, which, for a " thousand years, has braved the battle and the breeze." The spot where the flourishing city stands, was, fifty-eight years ago, a mere wilderness, and strange as it may appear, the journey from the Market-slip to the Jail-hill, which is not a quarter of a mile, would occupy, at the above period, half a-day, but now only five minutes. Then no previous vestiges of the labours of civilized man were presented to view to diversify the gloomy prospect. The obstacles that were to be met at every step, would have caused

men less imbued with the spirit of loyalty, to turn with disgust from the unpropitious scene, and retrace their steps to the land of plenty which they had left behind. But no hardships, however great—no privations, however severe,—no difficulties, however appalling, were sufficient to deter from their purpose, the lion-hearted founders of the city—without a roof to shelter their defenceless heads, surrounded by a pathless forest, and frowned upon by the rugged rocks, in a country then unfavourable (because unprepared) for the operations of the plough, and subject to a long and rigorous winter. Yet, the prospect of all these accumulated difficulties and privations were unable to impair their loyalty, or swerve them from the path of duty. But how different is that scene at the present day ! The city has a population of 30,000 souls, which the enterprise and activity of the inhabitants, and the liberality of the capitalists, are doing everything to increase. St John is incorporated, and the city comprehends both sides of the harbour, four wards being in St John, and two in Carlton, opposite ; each represented by an alderman and assistant alderman ; the mayor is appointed by the executive. Among the new edifices is a building for an exchange, a reading-room, a

police office, and a market—the lowest part of the building is occupied as a market, the rest as above stated. The building is highly creditable to the town. The St John Commercial Bank, a new and beautiful building, constructed of the Shelburn stone, is the best and handsomest building in the city. The front is very beautiful.

The St John Mechanic's Institute, (incorporated by Act of the General Assembly) erected a building, and devoted the same to the promotion of Science and the Arts, and the diffusion of useful knowledge. The corner-stone was laid on the 27th day of May, in the third year of the reign of Her Most Gracious Majesty, Queen VICTORIA, by his Excellency Major-General Sir John Harvey, K.C.B., and K.C.H., Lieutenant-Governor and Commander-in-Chief of the Province of New-Brunswick, &c. 1840.

The Institute was established in December 1838, and the first President was Beverly Robinson, Esq.

A new Custom-House has commenced in Prince William Street. The plan of the architect, and owner of the building, Mr John Walker, gives 200 feet front on the street; and it will be built to resemble the front of Carlton-House in London. The building will be occu-

pied as a custom-house, bonded ware-house, and treasury office. There is also an extensive block of brick buildings now erecting south of the Exchange Building. Among the private residences, I would notice particularly the mansion-house of the Hon. Judge Chipman, which has a very imposing site on the rise of land overlooking Prince William Street. The streets of St John are laid out wide, and at right angles. Advantage has been taken of the rebuilding of the town, to widen and lay-out new streets, in most of which are very excellent buildings. The place wears an air of bustle and activity, which gives everything a cheerful aspect. Ship-building appears to be a leading branch of the business of St John, and the towns adjacent. Some of the best ships in the world are built in this port, loaded with timber, and sent to different ports of England, Ireland, and Scotland, and the West Indies. The city contains several places of worship:—two Episcopal, two Presbyterian, two Wesleyan-Methodist, two Baptist, and one Catholic church.

The revenues of the city, for the year 1840, were £88,671, 4s. 6d. The Commercial Bank of New-Brunswick (in St John) incorporated by royal charter—capital £150,000, with power to increase to £300,000; *President*, Lewis

Burns, Esq.; Bank of New-Brunswick, in St John—capital £100,000; *President*, Thomas Leavitt, Esq. Inhabited houses, north and south, 1418; families, 2652; individuals of both sexes in St. John, north, 9516; south, 9765; acres of cleared land, 1071. The barracks are in a delightful position, overlooking the harbour.

The spring-tides at St John rise from twenty-four to twenty-eight feet; the body of the river is about seventeen feet above low water-mark. The ordinary tide of the harbour rises twenty-six feet, while above the Falls it only rises about eighteen inches; therefore the height of the Falls might be estimated at twenty-four and a-half feet. But this estimate will not be received as correct, when it is considered, that the entrance of the river, at the Falls, is too narrow to allow the sea to flow in freely; and, therefore, there is a fall inwards at high-water and a fall outwards at low-water, and the time of passing for vessels is fixed at three quarters of an hour each tide, and when the sea and river have assumed the same level, the Fall outwards we have estimated at twenty feet, and at high tides, the Fall inwards at high-water is fifteen feet, making the whole height of this double Fall, thirty-five feet.

The accumulated waters of this extensive and deep river, with all its lakes and tributary branches, is here dashed through a narrow gorge, and over a rudely inclined-plane into the sea. Interrupted by small islands above, and compelled to pass over huge masses of rocks obstructing the narrow passage, the river foaming and spouting with tremendous fury, assumes, at making its exit, a most tragical character, threatening with instant death any who may venture upon its troubled bosom; but on the flood-tide, the scene is changed—the ocean spreads its mantle over the thundering cataract, and flowing inwards through the narrow chasm, stills the noisy rapid—the tide-lock of the Falls is shut, and apparently to oblige the inhabitants, allows them to pass in safety even with large ships.

Perhaps there is not a river in America of the same extent, which has so narrow an outlet as the St John. From the Falls to the Grand Bay, a distance of four miles, this majestic stream passes through a tortuous channel, at many places not more than 250 feet wide, while, in the interior of the country, it will average from one to three miles in breadth. The rocky shores of its out-let have not been worn down and scooped out as is common on

the shores of all rivers, giving exit to immense quantities of ice ; on the other hand, they appear to have been separated from each other at a period comparatively recent, and the gorge through which the stream now passes, appears like a deep fissure, opened by some sudden movement in the earth. But we defer entering widely upon the interesting facts connected with this noble river, until it has been explored through its whole extent.

The city suffered much by fires in January 1837 ; the second in August 1839 ; and the third in March 1841. That on 14th January 1837, took place on Saturday night. The fire commenced on Peter's Wharf, about nine o'clock in the evening, by which, at least, one-third of the commercial part of the city became a heap of smouldering ashes. The total amount of loss sustained was estimated at £250,000 ; the compass of the fire, embracing two sides of Prince William Street, a front in Market Square, the east and west sides of St John or Water Street, the South Market Wharf, east and west sides of Ward Street, north and south sides of Peter's Wharf, Johnson's Wharf, Church Street, and Prince's Street. The number of buildings publicly noticed to have been destroyed was 108, tenanted by 170 different interests ; be-



sides an extensive range of wooden stores, occupied as ware-rooms for heavy goods. The reflection of the fire was seen at and above Fredericton, a distance of ninety miles. The falling of burning paper, and other materials, in flames, were noticed nine miles from the city, and so alarming was the scene from this circumstance, that at one time fears were seriously entertained that the greater part of the city would be destroyed. The second fire was on Saturday evening, about nine o'clock, August 1839, (the same day and hour of the week as the great fire in 1837.) The conflagration continued extending with unabated fury till nearly day-light, on Sunday morning, sweeping away in its course every building in Nelson and Dock Streets, &c. It is not at present known the full amount of loss from this awful conflagration. A far greater number of inhabited houses have been destroyed than by the great fire of 1837; and as they were mostly occupied by several families, it is calculated that nearly 3000 persons have been rendered houseless,—nearly all of them being of the working classes. The total amount of property destroyed, including buildings, merchandise, and household effects, it is thought cannot fall far short of £200,000, but the sum at this time can only be

conjectured. The burnt district of 1837, being situated to the southward of the Market-Slip, the fire did not extend to that portion of the city.

The third distressing fire broke out about one o'clock on Wednesday morning, 17th March 1840. The alarm bell aroused the citizens from their mid-night slumbers, and the lurid flame which was at the hour discernible, directed them to the fatal spot. Nearly all the buildings destroyed were insured, as were also some of the merchants' stock. Mr James Malcolm was insured to the amount of £2000. The different engine and fire companies of the city, assisted by the engines from Portland and Carlton, exerted themselves with praise-worthy alacrity. To record the loss of life accompanying this sad calamity, is the most painful part to relate. Mr Matthew Holdsworth went to examine the scuttle on the roof, and unfortunately stepped into the hatchway, and fell to the ground-floor, a distance of thirty feet—he left a wife and two children. The painful circumstances attending this conflagration, have cast a gloom over the community which has been rarely, if ever witnessed. Had it not been for the pipes and fire-plugs of the St John Water Company, this fire, disastrous as it has

been, would have extended yet farther, and laid a large and valuable business portion of the city once more in ruins. And the proprietors of that Company, who have year after year, struggled on against difficulties of no ordinary character, deserve the highest praise the city can bestow upon them. In defiance of the numerous obstacles which have almost wilfully been placed in their path, they have succeeded in furnishing the city with an abundant supply of water, but for which, at this time, the greater part of the inhabitants of St John would have had to mourn over further loss of life, and the prostration of the commerce and prosperity of the city for a very long time. How impressively should it rivet on the attention of all, the important admonition,—“ Be ye also ready, for in such an hour as ye think not, the Son of Man cometh.” By how uncertain a tenor do we hold life, property, and every earthly good! And yet, like every similar occurrence, it is to be feared that it will attract attention and observation for a little while, and then will be forgotten.

PORTLAND is a thriving place, connected with St John by a wooden bridge, but is not represented in its councils. It is the great ship-

building quarter of St John, and contains several foundries and manufactories. It presents, at all times, a scene of commercial bustle and mechanical labour. In Portland there are three places of worship. It contains 445 inhabited houses, and 1139 families,—total inhabitants, 6207. From Portland, a suspension bridge was proposed to connect its heights with the Carlton shore, and a company, with a capital of £20,000, was formed for the purpose. A lofty wooden erection was placed at either end from which to suspend the chain bridge. From a defect in the manufactory, the latter after being some days in position, and crossed by several foot passengers, fell early one morning, with a number of workmen who were completing the fastenings. Nothing now remains but the lofty wooden bridges alluded to. The company, after sinking £5000, and the capital above mentioned, abandoned all intention of proceeding any further in the work. The total length of the bridge was to have been 1400 feet, of which the chain part was to constitute 450.

CARLTON is a village opposite the city of St John. The locality of the town is much in its favour. The grounds of Carlton are highly romantic; to take a walk up the hill leading to

the Fort, would amply repay the traveller for his trouble, by the handsome prospect which will open to his view on all sides. Close by the Fort, the ground is quite commanding; you have a full view of the harbour, and as far out into the Bay as the eye can reach. To the east, the city presents itself, with its houses, appearing like so many blocks of wood piled one on top of another in strange disorder; to the left, Portland, with its numerous ship-yards, appear; also the ruins of that luckless piece of enterprise—"the bridge," which seem to be left standing by its projectors in token of the discomfiture and chagrin which covered them when it fell. Indeed, Carlton is a pleasant place; notwithstanding the barrenness of its soil, it is favoured by Providence, in more ways than one, and the day is not far distant when Carlton will be to St John, what Brooklyn now is to New-York.

The principal business done, is in the ship, deal, and timber yards, while a number of new houses is being erected, which keeps carpenters busily employed. The fisheries, too, are a lucrative source of profit to the place, and brick-making is carried on rather extensively; besides, there are several saw and grist-mills running constantly. There is an



Episcopal Church, and a Dissenting Meeting-house. There is a small steam-boat which plies between the city and this place, every quarter of an hour, remaining five minutes on either side. The arrangements with reference to this boat, are equal to any I have met with in the British Provinces. The docks on both sides of the river are commodious and safe. Persons desirous of taking the St. Andrew coach, would do well to cross over to Carlton on the preceding evening, and then gain the coach on the following morning. A short distance from the shore, and nigh to Carlton, a beautiful marble has been discovered. The rock is highly crystalized; the marble is of a light pink colour, clouded and shaded with veins of light green chloxite and serpentine, resembling very nearly, the "*verde antico*" of the Italians. At the surface, the rocks have been fractured by the frost; blocks of large size may be procured by opening the quarry to the depth of a few feet. There is in Carlton 153 inhabited houses, occupied by 260 families. Acres of cleared land, ninety. It is forty-five miles from St George, sixty-five from St Andrews, and about eighty-six from St Stephens, which is on the lines.

LANCASTER is the next place the traveller passes through to St Andrews. A large hill on the east side of the Musquash, and about a mile from the village of Ivanhoe, is composed of conglomerate, which has been intensely heated by its proximity to an overlaying mass of trap-lime. Stone appears on the opposite side of the river. A tract of land was purchased by some Americans for the purpose of quarrying marble from it. Like many other speculations of the kind, it proceeded no farther; notwithstanding good marble might be procured at the spot. The village of Ivanhoe belongs to the Lancaster Mill Company, who have here a very superior and powerful set of mills for the manufacture of all kinds of lumber, and an incalculable amount of unemployed water-power. The mills are 200 feet in length, by sixty in breadth. The Company own a tract of land, containing upwards of 50,000 acres in connexion with these mills, and from which they procure supplies of excellent timber. In the parish of Lancaster, there is a neat church, but very seldom is divine worship performed therein. There are 219 inhabited houses, 252 families, and 4446 acres of cleared land. From this place to St George, there is little worth noticing, as it is

nothing more than a dense wood, the whole distance of thirty miles, except about a dozen houses on the road side, occupied by individuals from Ireland.



## CHAPTER II.

St George's, its Falls, Mills—Mascreen, Le Tang, Le Tete, Settlements, Churches, Inhabited Houses, Families, Persons, and Acres of Cleared Land—Pennfield, Inhabited Houses, Families, and Acres of Cleared Land—Winter Campaigns of the Lumber Men, &c.—St Patrick's, its Situation, Inhabited Houses, Families, and Acres of Cleared Land—St Andrew's, its Locality, Soil, Churches, Inhabited Houses, Families, Acres of Cleared Land—St David's, St James', St Stephen's with their Situation, Inhabitants, Families, Acres of Cleared Land, &c.—the Islands in the Passamaquoddy Bay, their Length, Breadth, Fisheries, Timber, Soil, Inhabitants, Acres of Cleared Land, &c.

ST GEORGE, or, as it is called by many, MAGAGUADAVIC, is situated to the eastward of St Andrew's, with St Patrick's interposed. Its two principal settlements are placed, the one at the Upper, and the other at the Lower Falls of the Magaguadavic, a fine stream flowing through the county and parish, which issues from a series of fine large lakes of the same name, about twenty miles from the sea. The upper and smaller settlement is seven miles distant from the lower, which again is situated

at the head of the tide, four miles above the junction of the river Mascreen.

Few places in the Province afford a more singular and beautiful spectacle than the Maguadavic Falls. The river, after descending from the mountains northward, passes through a level and wide plain of intervale, and when it reaches the village, is about 100 feet above the bed of the river below ; and the main Fall of the water descends by five successive steps, in the distance of 500 yards, through a chasm averaging about 35 feet wide, and 100 feet deep. Through this narrow gorge, the whole contents of the river is poured out with a fury that defies description. The industry and ingenuity of man have considerably modified the appearance of this remarkable spot. It still, however, remains a most extraordinary hydraulic spectacle, and affords a power for turning machinery beyond computation. Having swept slowly along the valley above, the water is accumulated at the bridge over the top of the Falls, it is then thrown by its own weight into the deep and narrow opening below, where, spouting from cliff to cliff, and twisting its foaming column to correspond with the rude windings of the passage, it falls in a torrent of froth into the tide below, or passing beneath

the mills, its fury seems abated as it mingles with the dense spray floating above. There are six saw-mills huddled together at this spot, and they appear like eagles' nests clinging to the rocks on each side. A considerable sum of money has been expended in their erection, and they are now in full operation. The deep cavities in the rocks are overhung with the alder and creeping evergreens, which seem to be placed there for the purpose of decorating one of Nature's wild performances. The low roofs of the mills are strongly contrasted with the massive rocks they occupy, and where they hold a precarious situation. The shelving piles of deals seem to mock the violence of the boiling pool beneath. Such is the power of habit—the sawyer, careless of danger, crosses the plank across the gorge, and ventures where his life depends upon an inch of space. Of this I have frequently been an eye-witness, (my house being near the Falls.) These Falls, if the scenery in its neighbourhood possessed no other charm, would amply repay the admirer of nature for any expence or inconvenience he might incur in visiting them, and in England, this village would be a place of annual and crowded resort. There are three places of Divine worship at the village, one at the Upper Falls, and

one in the Mascreen settlement. The parish contains, including the Le Tang, Le Tete, and Mascreen settlements, 363 inhabited houses ; 380 families, and persons, 2422 ; and acres of cleared land, 4097.

About three miles up the river, there is a settlement, chiefly agricultural, named Mascreen, and consisting principally of Scottish Highlanders from Perth, Sutherland, and Caithness-shires, and their ramifications. It is situated at, and near the mouth of the river, stretching for several miles along the south side of the Bay, and terminating one of its inlets, called Le Tete Passage. In this settlement, there has been a neat church erected ; in June 1839, it remained in a very unfinished state, only being rough boarded. At this time, the inhabitants were unexpectedly visited by the Rev. CHRISTOPHER W. ATKINSON, Missionary from King's County, twenty-seven miles from the city of St John. Inasmuch as this people had not been favoured with more than six sermons during the last year, they gladly engaged Mr A. for one year, at the end of which period, the whole of the people unanimously came forward, and not only chose, but appointed Mr C. ATKINSON to be their pastor, with a promise of

£100, per annum. The engagement with Mr A. is as follows :—

WE, the undersigned General Committee of the Presbyterian Church in this place, being destitute of a regular minister, have, in consideration of the Rev. Christopher Atkinson, giving (during the three years he has been in this Province, and more particularly the last year in which he has officiated as our minister,) the undeniable proofs of his sincerity, zeal, and ability, in the work of the ministry, chosen and appointed the said Mr Atkinson to be the pastor of the above church, with the entire approbation of the congregation, and that Mr A. is henceforth to receive for his ministerial labours in this parish, the sum of £100, per annum; and we trust he will continue to have the respect and love of his people, which he has already obtained, and that his valuable labours may more than ever be appreciated by those who may henceforth have the pleasure of sitting under his ministry.

Signed, June, A. D. 1840, and the third of the reign of Her Most Gracious Majesty, Queen Victoria.

GEORGE MACKENZIE, Esq.

PETER M'DIARMID, Esq.

HUGH M'LEOD, Senr.

DONALD M'KENZIE.

ARCHIBALD M'VICARS.

GEORGE M'VICARS.

THOMAS LAILAND.

*Muscreen, St George, N. B.*

The above appeared in the " St John Courier and Christian Reporter," in June, A. D. 1840.

*After Mr A. was appointed to this church,*



Faascreen Church, St George's, New-Brunswick, B.N.A.

REV. C. W. ATKINSON, A.M. MINISTER.





he used every means to have it completed. In May and October 1840, he collected upwards of £20 in the city of St John, and £35 in Halifax, Nova Scotia, both of which sums have been paid into the hands of the Committee already mentioned, and which also appeared in St John papers to that effect. The church still remains in an unfinished state.

On Mr ATKINSON leaving his pastoral charge in 1841, he received the following from the elders and managers of his church, and which appeared in the city papers, before Mr A. left the Province :—

To all whom this doth or may concern, We, the undersigned General Committee of the Presbyterian Church in this place, (Mascreen) do hereby declare, that the Rev. Christopher Atkinson, A. M., has been our pastor since the 16th of June 1839, during which period he has supported an unblemished character, and has conducted himself in every respect becoming a faithful and indefatigable minister of the gospel; and the only reason for Mr Atkinson leaving us, is, because there are so few in this part to support the ministry; and we humbly pray, that Divine Providence will direct him to that sphere of labour in which he will be recompensed for his valuable labours.

Signed by the General Committee, in behalf of the Congregation, &c.

PETER M'DIARMID, Esq.

HUGH M'LEOD, Senr.

ARCHD. M'VICARS.

GEO. M'VICARS.

THOS. LALLAND.

*Mascreen, St George, N. B. }*  
*26th April 1841. }*



From my knowledge of the Rev. Mr Atkinson, I have reason to believe the foregoing statement to be correct.

SAMUEL THOMSON, A. M.  
*Rector of St George.*

In connexion with this place, is a small settlement called Le Tang, which is inhabited by a few Scots families, who left their country about twenty years back, (viz. Argyleshire.) Le Tete, with the above settlements, are in the parish of St George.

PENNFIELD is the next parish I shall notice. This place is situated to the eastward of St George, and obtained its name from a number of families who emigrated from the United States, and who belonged to the Society of Friends. Its soil is excellent, and its coast is indented by Le Tang and Beaver Harbours. At this place I preached every other Sabbath for a considerable time, it being only six miles from St George. During my visits to this parish, I was kindly entertained by Joseph Knight, Esq. J.P., who always took great care that not only myself, but my horse should not want. There is in this parish 168 inhabited houses, and 170 families, with 2235 acres of cleared land. The *male population* of St George, St Stephen's, St James', St David's, St Patrick's, and Penn-

field, go in the winter into the woods for the purpose of lumbering, without which many would not be able to raise their numerous families. The plan of these winter campaigns is as follows:—An enterprising farmer enters into an engagement with a timber merchant, whereby the person with whom the farmer makes his engagement, furnishes him and his gang or gangs, of twelve or more men each, with provisions and other necessities, taking for the same the timber and saw logs of the farmer, and in spring pays him the balance due for whatever quantity of timber he has furnished him with. During their stay in the forest of spruce and pine, the men raise for themselves small huts with boughs and trunks of trees, and cover them with spruce bark, one for the oxen, one for sleeping in, and a third for cooking. The two latter are divided by a stout plank bench running length ways from end to end; they overspread the whole nearly two feet thick, with pliant and ever-green twigs of the hemlock, and by a very large fire, defy the uttermost efforts of the sternest North American winter, and the wild beasts which, by chance, may surround them. Having erected *their* domicile, the sound of the axe daily reverberates through the dense wood. How

bow the sturdy maple, spruce, &c. beneath the stroke !

The oxen haul the timber as soon as it is cut down, on the slippery surface of the beaten snow, to the nearest brook, one of the feeders of the nearest river, where it is yarded on the ice until the grand break-up of the ice, which is about the beginning of April, in which month—

“ The winter ’s nearly gone—the earth has lost  
Her snow-white robes, and now no more her frost,  
Candles the grass, or casts an icy cream  
Upon the silver lake, or crystal stream.”

When the vast body of snow that overspreads the country, swells the various streams into impetuous torrents, carrying the ponderous produce of these romantic winter expeditions down into the main rivers, I have seen rafts, in proceeding from Fredericton, &c. of from 12,000 to 18,000 tons of timber; and I have known the Maguagadavic (at which village I resided two years) covered with a floating bridge which reached a considerable distance, and which was bending its course to the mouth of the Mascreen river, at which place there were several ships to receive it.

ST. PATRICK’S.—The first settlers of this place were soldiers from some Scottish High-

land Regiments, disbanded after the close of the American revolutionary war. It is more rocky and hilly than the other parishes, but the soil in most places is good, and in the upper part of the parish inferior to none in the country. It is intersected by the Digdeguash and Moannexo streams. There are 294 inhabited houses, and 303 families, with 5206 acres of cleared land. There is a Presbyterian and Wesleyan-Methodist Church in the parish.

The local situation of ST. ANDREW'S, as a frontier town, bordering on the United States, renders its population of a more fluctuating character. The data from which calculations alone can be made on this point being thus vacillating, the estimates themselves, from one period to another, must, in a corresponding degree, partake of the uncertainty. It is calculated the population of the town has decreased at least one-fourth since 1830, from a combination of causes, and one circumstance which has of late years operated as a check to the prosperity of the town, and led to the dispersion of many families, is the number of rivers in its neighbourhood, viewed in connexion with a change of system which has taken place in the shipment of their produce. On these rivers,

an extensive trade in the staple commodity of the colony is pursued. Numerous saw-mills have been erected on them, and many hundred thousands of tons of timber are every year floated down them. This produce is eventually carried to the West Indies, in the shape of boards and shingles, and to several parts of England, Ireland, and Scotland. It will be obvious, that the whole of this trade would centre in St Andrew's, were its position like that of St John, at the embouchure of a large river, and the only large one in the whole country emptying itself into the sea. Instead of this, St Andrew's is placed on a bay about twenty miles long, and nearly half as much broad, and into this spacious bay three rivers, St Croix or Scoodiac, at one end, the Maguagadavic, at the other, and the Digdeguash in the middle, besides smaller streams, disemogue their waters. The country portion of St Andrew's parish is in the course of gradual, but accelerating occupation, by industrious emigrants and their offspring.

The soil in the neighbourhood of St Andrew's is very fertile. Wherever it has been derived from, the decomposition of sand-stone, the beds of clay and gravel, are less productive, *and would be much improved by the application of marl or lime.*

Inhabited houses, 509 ; families, 617 ; acres of cleared land, 5309. There is one Episcopal Church, one Presbyterian, and one Wesleyan Church ; each have a minister ; as well as a Roman Catholic Chapel.

ST DAVID'S is the next parish, which is an excellent farming district, and contains 171 inhabited houses, 175 families, and 4886 acres of cleared land.

ST JAMES' is the next parish. This is altogether an inland parish, and the only one in the county that is not nigh the salt water, touching St Stephen's on one side, and St David's on the other. It stretches northward into the interior, until it joins the county of York. I rode through this as well as those annexed to it in June 1839. Inhabited houses in this parish, 179 ; families, 181 ; and 4499 acres of cleared land.

ST STEPHEN'S is the next place that is worthy of our notice. It lies by the road twenty-five miles from St Andrew's, and is a very thriving parish. It touches on the St Croix on *its left bank*, at the head of the ship navigation, and being on its western boarder skirted by the

same bounding river; this parish combines within itself, the pursuits of agriculture, lumbering, and commerce. St Stephen's possesses a mineral spring of no ordinary medical powers. It is near the church; a small stream issues from the earth, and contributes to the supply of a brook, crossing the street. The water is very clear—has a weak fetid smell, and unpleasant taste when first taken into the mouth. The following analysis was repeated three times with nearly the same results—yet it may not be correct :—

Sulphurated hydrogen, . . .	4. 5 cub. in.
Sulphate of Soda, . . .	5. 4 grains.
Lime, . . . . .	2. 5
Muriate of Soda, . . .	6. 0
Oxide of Iron, . . . .	0. 4

The sulphurated hydrogen reddens the infusion of bitmus, and precipitates the nitrate of silver black. The sulphate of lime was detected by evaporating a pint of the water down to four ounce, a precipitate of the sulphate of lime formed, which was soluble in 400 parts of water; and the solution afforded a precipitate *with oxalic acid*, carbonate magnesia and alcohol. The aperient effects of this spring are

very clear, and they evidently arise from the sulphate, and muriate of soda contained in water.

From the above, it therefore appears that it is not inferior in its medicinal powers to many of those in England and France,—admitting that the good effects of watering-places are in part produced by a change of air, amusement, and scenery. St. Stephen's is pleasantly situated, with a fine surrounding country. There is also another mineral spring at Oak-Bay, its properties appear to be similar to the above. Milltown, about three miles towards the United States, is in the same parish. In the former place there is an Episcopal, and a Wesleyan Church, at Mill-Town, so called on account of the great number of saw-mills. There is a Wesleyan and Catholic Church at each place. There is a toll-bridge which takes over to the State of Maine. St Stephen's is opposite to Calais, in the above-mentioned State. Inhabited houses, 495 ; families, 579 ; acres of cleared land, 4225.

CAMPO-BELLO, although an island in the Passamaquoddy-Bay, is in this county (Charlotte.) It is two miles long, and about two in breadth. Its longest diameter is from north to south, and whether considered on account of



its fine harbours, fisheries, or timber, is extremely valuable.

The whole of the eastern shore is bold and lofty ; frightful, needle-shaped cliffs, and shelving masses of slate descend into the sea so perpendicularly, that, in foggy weather, vessels might be thrown by the waves against the cliffs, before any danger could be apprehended. Instead of the overhanging precipice, the west side of Campo-Bello has a gentle slop towards the shore, where the inhabitants have made considerable progress in agriculture. Inhabited houses, 111 ; families, 132 ; acres of cleared land, 1000.

Friar's-Head is a considerable cliff, on the south side of the harbour, at Welshpool. West Quaddy light, on the American shore, stands on a low cliff. Between Quaddy and this island, the tides run with great rapidity ; and as the channel, at low tide, has no more than two feet of water, and contains a number of dangerous rocks, the navigation is almost impracticable, except at high-water. This island is in part owned by Captain Owen, R.N., who resides at Welshpool. It contains 111 inhabited houses, 132 families, and there is 1000 acres of cleared land. It is about sixteen miles from St Andrew's, and eight miles from Dear Is-

land. This island is stretched across the Bay of St Andrew's, in a north-east and south-west direction. The Scoodic empties between the south-west part of the island, and the American shore, while the waters of the Digdeguash and Magaguadavic are discharged into the sea, through two openings between its north-east point, and the mainland of New-Brunswick. The largest of these passages is called "Big Le Tete," and the lesser "Little Le Tete." The island obstructs the ready exit of the waters from the rivers, and the tide rushes through these passages with great rapidity, occasioning eddies which frequently perplex the best pilots. It is about twelve miles long, and upwards of three broad. I preached two sermons on the island, 24th April 1840. The south side of the island presents a chain of low hills, composed of trap-rock and broken slate. These hills are scattered over an inclined-plane, extending to the shore, which is singularly indented, and occasionally occupied by beds of sand and gravel. Sometimes projecting masses of rock extend into the sea, affording fine harbours for boats and other small craft. This side of the island is also sheltered by a great number of small islands, scattered along the shore. Many of the hills are naked, others, and the

valleys, are covered with a light growth of birch and spruce. Many are the inducements offered for the inhabitants to cultivate the soil, and a number of fine farms have been cleared, but as fishing is considered to be the most profitable employment, they have been much neglected.

The next is Indian Island, about seven miles from the latter. It was with great difficulty that I could reach this place. The sea runs very heavy between here and the Wolves—six islands so called, which are of considerable magnitude, and are well known to the mariner for having been the scene of many shipwrecks. They are situated very unfavourably for the navigation of the coast. Indian Island is about a mile or so long, and three quarters of a mile broad. I landed on the south side, about two o'clock on Saturday, the 25th April 1840. At the request of the inhabitants, I preached at three o'clock and seven. This island is included with that of Deer-Island, and several other small islands. Indian Island is about one mile from Moose-Island, on the American side, on which there is a beautiful town called Eastport, in which I have several times preached, and received great kindness from the people. This island is about six miles broad, and is in the

county of Washington, and the state of Maine. It is impossible to conceive a more interesting sight than is presented in this Bay during the summer season. It is similar to the scene presented on the northern coast of Scotland, in the months of July and August, which I had the pleasure of viewing in 1826, between Stronsay and Ronaldshay Island. Boats and vessels becalmed and carried away by the tide, are at one instant hidden by the blackened rock, or the green foliage of some small island. At another, they glide from behind the curtain, and appear struggling with the overwhelming current. Frequently several hundreds of boats, huddled together, and practising a deadly deception on the haddock and cod, from a signal given by the tide, draw up their anchors, and hasten to the shore. The silence of evening is broken by the sound of the Indian's gun, levelled with fatal aim at the rising porpoise. The hollow sound of the "loon's" note is discordant with the scream of the gull. Here the glassy surface of the water is broken by a shoal of herring; yonder the spouting grampus is blowing up the spray in preparation for another dive. Perched on the rock, and armed with a pin-hook, baited with a shrimp, the fisherman's boy can fill a large bag with her-

rings, sooner than a dozen of scientific anglers could replenish it with trout during a whole season. The sea is alive with fish—its surface with human beings, and the air with feathered tribes.

The next island worthy of notice is Grand Manan, which is a large and beautiful island, situated about twelve miles south from Campo-Bello and West Quaddy-Head, and sixteen miles from the American shore. It is twenty-four miles long, and about five miles in breadth, its longest diameter being from north-east to south-west. The north-west side of the island lies nearly upon a straight line, notwithstanding several high headlands that advance into the sea. It is inhabited on this side, which presents a level front of overhanging cliffs and lofty mural precipices of majestic grandeur and beauty. Between the mainland and the island, there is a very powerful current, both on the flood and ebb tide. When the wind is opposed to the currents, a heavy sea is soon produced, which, by its violence, is constantly undermining the rocks, and hastening their downfall. Deep caverns are worn out of the solid base of the lofty wall, which tumbles headlong into the sea beneath. The northern side of the island will average from three to four hundred feet

in height. Its lofty mural cliffs stand like rude imitations of masonry, and rival in grandeur those of the celebrated Cape Blomidon, in Nova Scotia; the rock, at many places is perfectly basaltic, and appears like large pieces of timber placed upright, side by side, with a perfection and beauty equal to the basaltic columns of Staffa. These are met by enormous blocks of rhomboidal and amorphous traps, which, from their architectural arrangement, appear to have been laid by the skill and ingenuity of man.

Along the south side of the main island, are a number of smaller islands; some of them are connected with each other by reefs of rocks, and bars of sand, which are covered by the sea at high water. The smaller islands afford shelter for vessels at all times. A number of ledges appear only at low water—others are always covered by the sea; to avoid them, the greatest care and experience are necessary on the part of the pilot.

On the south-western side of the Grand Manan, appears to be the remains of submarine volcanoes. Between these rocks, and those forming the south side of the Bay of Fundy, on the coast of Nova Scotia, there is a great similarity, and it is well known by pilots, that a long reef of rocks extend across this part of



the Bay to Brier Island, a distance of fifty miles. Fortunately, the reef is placed so deep beneath the sea, that ships may pass over it in safety, although it alarms the stranger by breaking of the water over its submarine precipices, and "dark unfathomed caves." But what is most remarkable in connexion with this island, (Grand Manan) is the fact, that the whole south side of the main, and all the small islands in that direction, have, within a recent period, been submersed to the depth of eighteen feet. At the time this submersion took place, the island was not inhabited; but, there are several persons who can remember the tradition, that there once existed between the Main, the three Duck-Nantucket, and other islands, a kind of marsh, which occupied several thousand acres, and was only covered by the sea at high tides. This kind of marsh had also been seen at Grand Harbour, the thoroughfare, and other places along the shore. It produced a peculiar kind of grass, which was used for fodder. All these marshes have now disappeared, and it is only at a few places where any parts of them can be found, and wherever any remnant still remains, it is situated eighteen feet below the mark of the highest tide, and is covered during *every influx of the sea*; not only this marsh, but

large bogs of peat have been buried beneath the ocean, until its waves, and the rapid motion of the tides, have almost removed them, and left their beds to be overthrown twice in every twenty-four hours.

The stumps of a great number of trees—the cedar, the hemlock, and pine—still remain firmly secured in the sunken earth by their roots, and the very spots where they flourished, is now covered by succeeding tides. It was by this submersion, that the small islands became isolated from the Main, for the marshes and peat-bogs formerly uniting them, were soon removed when they became exposed to the violence of the sea and its currents. It is certain, and the fact is confirmed by twenty-eight years of careful observation, that the tides in the Bay of Fundy, are slowly, but gradually rising every season. This circumstance does not, however, by any means account for the change of level in the south side of the island, where vessels now anchor at places formerly dry at low-water, and where their tackle is often entangled among roots and stumps of trees that formerly stood above the level of the ocean.

There have been also instances, within the present era, of whole continents being elevated by subterranean causes, while the coral insect



of the Pacific Ocean is raising his mound beneath the sea to become at last the residence of man,—while the Ganges is sweeping up the sand, and building islands,—the volcanoes of Iceland are lifting the lava above the water, and the “earth’s safety valves” are performing the double office of venting internal heat, and erecting continents. However remote may be the time when the islands in the Passamaquoddy Bay were raised up, there can be no doubt that they owe their existence to causes to be explained, by referring to operations still in continuance upon the earth, and a violence that once shook the strata to their lowest foundations.

The largest of these small islands are inhabited; and although the soil is scanty, fine crops of grain and potatoes are generally produced. It is from the excellent fisheries the inhabitants derive their chief support, and, therefore, a soil capable of successful cultivation is neglected. The season is short, and the frosts appear early in the autumn; but vegetation is rapid, and fine fields of ripe wheat may be seen in the month of August. Inhabited houses in Grand Manan, are 154; families 170; cleared land, 2671 acres.

*A small sailing vessel visits the island from*

St Andrew's twice a-week. In the fishing season, a great number of American vessels attend at this time. In fine weather, the surface of the water around the land is covered with these craft, and a more singular and lively scene can scarcely be presented than the panorama of Northern Head. This fishery is of great value to New-Brunswick and Nova Scotia.

Nearly all the islands in Passamaquoddy Bay, and along the coast, present to the north, steep or perpendicular cliffs, while, on the south sides, they descend by a gradual slope down to the sea.

This circumstance has arisen from the collection of diluvial debris formed in the eddies made by these prominences, and is exactly similar to those occurring daily in rivers, upon a much smaller scale. A dreadful fire broke out in August 1839, by which the Episcopal Church was entirely consumed. There are 154 inhabited houses; 170 families, and 2671 acres of cleared land.

The road from St Andrew's to Fredericton is through the Brockways, Harveys, and Hanavelle settlements. The first of these is in York County. From the Digdognash, to this place, there are but few settlers; there is a fair proportion of good land, but much of it lies be-

tween two rivers, and which is flat, low, and unfit for cultivation. Between this place and the Harvey settlement, there is a beautiful district of excellent land, all held and owned in a wilderness state by the proprietors. The Harvey settlement is composed of English and Scottish emigrants. A few years ago they suffered severe hardships and privations, but at present they are in comfortable dwellings, and making great clearings in the woods. From here, to the Hanwell settlement, the road passes through much farming land, with several patches of swamps and barrens, and some ranges of stony ground, which reach near the Erina Lake. This settlement consists of about twenty families, from the Emerald Isle. From this place to Fredericton, the land is thickly studded with heavy hemlock and spruce, and the road leads to the Oronoco Lake, till the traveller reaches the seat of government.

## CHAPTER III.

Fredericton, its Situation, Size, Progress, Trade, Buildings, its Advantages, Inhabited houses, Families, Persons, Acres of Cleared Land, Horses, Neat Cattle, Sheep, Swine, distance from St John's, St Andrew's, Chatham, Quebec, and Halifax.—Chatham, Douglas, Bathurst, Dalhousie, Richibucto, Shediac, Petitoodiac, Hopewell, Sackville, Dorchester, Sussex-Vale, Dutch-Valley, Londonderry, Penn-Mill Creek, Black-River, Hampton, Kingston, Sheffield, Gagetown, Woodstock, Keswick, &c.—Prince William, Jackstown, Wakefield, with an account of their Soil, Public Buildings, Churches, Mills, Families, Acres of Cleared Land, &c.

FREDERICTON is about seventy miles from St John, and is the seat of the Provincial Government, and is situated at a place formerly called St Ann's, having been settled since A.D. 1785. Here is the residence of the Lieutenant-Governor, and the legislature holds its sittings here. Fredericton, though at the head of a sloop navigation on the St John, and from that circumstance, is doing considerable business with the inhabitants of the surrounding country,—presents none of the bustle of a trading town.

but wears rather the aspect of a country village. It stands on an extensive and level plain, about a mile in length, and half a mile in rear, with high ground in the rear, and on either side. It has evidently been the bed of a former lake, and was probably laid bare when the retiring waters of the St John made their last abrupt escape, and fell to their present ordinary level.

The streets are regularly laid out, being all at right angles. The principal building in Fredericton, and perhaps the finest architectural structure in the Province, is the University of King's College, which occupies a commanding position on the hill in rear of the town. The College building, besides excellent lecture-rooms, and a chapel, afford ample accommodation for professors and students—its two stories and basement being devoted to these purposes. The size of the building is 170 feet long, by 160 feet wide, with a handsome portico to the main entrance. It is built of dark grey stone, curiously intermingled here and there with narrow lines of brick, the use of the last being, in my opinion, of unquestionable taste in so massive a structure. The College *has been liberally* endowed by the Province. *The Province Hall*, a most unpretending edi-

fice, for the sittings of the legislative bodies, having, on either side, smaller buildings appropriated as the office of the secretary of the Province, and the commissioner of Crown Lands; the residence of the Lieutenant-Governor is at the upper part of the town, and in a delightful situation, commanding a pleasant view of the river—it contains Madras and other schools. The other buildings which attract attention, are the Baptist Seminary, two stories high, sixty feet by thirty-five wide, attended by nearly one hundred pupils of both sexes; the Episcopal Church is a neat building; the Presbyterian Church stands near the Baptist Seminary, and this last year has been greatly enlarged.\* There is also a large Baptist chapel, which was built in 1840; a Roman Catholic chapel, and a Methodist chapel, are the several places of Divine worship in the place. A Reading-Room has also lately been established; and there is a well selected public library. There are also three banks, an alms-house, an excellent barracks; a branch of the commissariat is also stationed here, and Fredericton has been made military head-quarters for the lower Provinces.

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\* The writer of this officiated in the above church, on Sabbath, the 30th-September 1837.



Fredericton was formed by Governor Carlton, shortly after the separation of the Province from Nova Scotia. From this place, as from a centre, roads diverge to the different parts of the Province, which are of easier access from Fredericton, than from any other point whatever. The principal places, such as St John's, St Andrew's, Cumberland, Chatham, Bathurst, and Madawasvia, lying in a broken circle round it.

As a military position, it is unequalled—as from the contiguity of the different important parts of the Province, they could be sooner obtained from this place than any other. It also forms a connecting link between the Atlantic colonies and Canada, and is a safe and convenient place for forming magazines, and equipping troops on their route from the sea board to Quebec. The importance of this place for those purposes, was well realized during the last war (in 1837-38) and should not be lost sight of. The river St John appears to have been the old and usual route of the French and Indians in passing from Canada to Nova Scotia, and New-England, long before New-Brunswick was settled; and Fredericton and the villages near it, no doubt, were among the principal Indian stations, long before the country

was known to the French or English. According to Douglas, this was the most direct route from New-England to Canada, and was taken by Colonel Livingstone, and the Baron Castine, in A.D. 1710, when they went in great haste to acquaint the Governor-General that Arcadia had fallen into the hands of the British.

The natural advantages Fredericton possesses from its recent position, became every year more important, and it is only to be desired, that the time is not far distant, when her inhabitants will avail themselves of those facilities afforded by the proximity of water-power, to establish manufactories and machinery. Indeed, a spirit of enterprise appears to be rapidly spreading in this place, (Fredericton) which cannot fail, if properly directed, to produce the most beneficial results.

Thus, eligibly situated, it certainly is to be regretted, that it is not more distinguished for enterprise, and that it is destitute of those useful institutions which exercise so beneficial an effect upon society, and without which, its members must be deficient of that intelligence and liberality that characterize the present age, but which are almost invariably the result of intellectual improvement. It is also a misfortune



for the place, that efforts are not made to arrest a large portion of the trade of the upper part of the Province on its way to St John, for the merchants, generally speaking, procure their supplies of British, West India, and other goods from the city; and as steamers run twice a-day between that place and Fredericton, which is seventy miles by water, persons of stated incomes, and others who can afford it, procure the principal part of their supplies and clothing from Halifax (N.S.) that city, and even from England and the United States; although there is abundance of cultivated and excellent land in the vicinity of the town, and settlements are rising up continually at no great distance above and around it.

Owing to the lumbering pursuits in which the people on this river, as well as in other places, have engaged, and to which toilsome and semi-savage life they are unaccountably prone; a large amount of property is under mortgage to the supplying merchants, who have to secure themselves in this way for provisions, and articles advanced to enable parties to pursue an occupation attended with very great risk. And, as from various causes, individuals who are not involved, have farms to dispose of,—emigrants, *or others*, having a small capital at command,

and being desirous of settling in the country, can have no difficulty in procuring eligible situations in any part of the Province at a moderate price.

Fredericton, which has been for sometime the extreme point to which steam navigation has advanced—when we consider that it is a place where the public offices are situated, and the heads of departments reside, and is surrounded by a well settled country, it is natural to infer, that it is one of much importance, and that there would be employment for a considerable number of persons of various pursuits. By a return made in 1840, it appears that there is a population in the parish alone, amounting to 4000 souls.

As the object I have in view is to point out places where the man of property may invest his capital in the purchase of lands—the mechanic and labourer find employment, and the emigrant a settlement—it will be proper that I should state with candour, any difficulty that exists in this part. As to servants, a class of persons on whom the domestic order and comfort of a family principally depend—those of a good description are much wanted; but it is in vain to expect them, in the absence of those wholesome laws and regulations that prevail in

the Mother Country. Here domestics are hired by the month, without any regard to character or qualification, merely to meet the exigencies of the present moment; and the result is, a succession of changes is continually taking place, and complaint is the order of the day. As to the labouring men, and the mechanics, the wages they obtain is high, but the mode of payment, (chiefly out of the shop) reduces it probably to its proper level, although it acts unjustly upon those who are not disposed, or are not so situated as to pay in this way. The result is, that great difficulty exists in having work of any kind completed promptly; and in this respect, as well as others, Fredericton exhibits a state of society not to be equalled in North America. Persons complaining of those whom they employ, and others who are employed, being dissatisfied with their employment; a remedy for all this is to be found only in a resort to cash payments. When individuals are hired, they should be paid for their labour in cash, and allowed to purchase any articles they may require, when that can be done to the best advantage. If those who reside in the neighbourhood of the place have *any debts to pay, or agricultural produce to dispose of, instead of as at present, taking it to*

a shop where they are indebted, or where an apparently high price is given, payment being made in goods at an advanced rate to meet it; this should be carried to a public market, and there sold upon the best terms, and the party should pay his debts in money, and make his purchase in a similar way. Were this healthy state of business to prevail, much of the present cause of complaint would vanish—competition would be introduced, and the exorbitant rate of living must be materially reduced.

From its situation, Fredericton ought to be a place of excellent business, and should be abundantly supplied with provisions; but at present the former is confined to a retail trade, and advances to lumbering parties, while the place is very irregularly supplied with fresh provisions; and although there is a large market-house in Fredericton, yet there is but one butcher in it, and only three bakers in the town. There is, besides, a sort of *non-chalance* pervading the labouring classes of society in this place, that is quite novel and unpleasant to those who have enjoyed the benefit of the conventional regulations that abound in the Mother Country, and other parts of the British possessions in this hemisphere.

As respects the man of property, however,

there is, inhabited houses, sixty-eight ; families, seventy-one ; acres of cleared land, 545.

About three miles on this side of Newcastle, there is a small ferry to cross (Wilson's Point.) Newcastle is the shire town of the county, (Northumberland) and was greatly injured by the extensive fire of 1825, which swept off that part of the Province—from the effects of which, it has never since recovered, although, as the country above becomes more agricultural, it must, from its position, necessarily resume its former importance. There is a Presbyterian church here. Inhabited houses, 404 ; inhabitants, 433 ; acres of cleared land, 2000.

DOUGLAS is about a mile from Newcastle, on the road to Chatham ; is seated on the north bank of the river, and was destroyed in the general conflagration of 1825, and has since been rebuilt. It contains stores and tradesmen's shops. Messrs Gilmour & Rankine carry on an extensive business here. The most conspicuous building in this place, is a fine edifice for a marine hospital.

About five miles from Douglas, is Chatham, which is situated on the south side of the river. *At the east of this village, is a Presbyterian church, dedicated to St Andrew, a small but neat*

edifice, surmounted by a spire, with an inserted belfrey. There is also an Episcopal, Catholic, Secession, and Wesleyan-Methodist churches—the latter will contain five hundred and fifty persons. The building is neat, and well arranged, and has a fine portico, embellished with Grecian pillars, which inclose a double vestibule. At this place, the Messrs Cunards have a very large steam, saw, and grist mill establishment. There is a post-office, reading-room, and printing office, which issues a newspaper every Tuesday, called “the Gleaner.” The village is exceedingly ill laid out, both for elegance and convenience. The buildings stand along both sides a very crooked road, without the least appearance of order or regularity.

The river abounds with fish, particularly shad and salmon. It is about a mile broad, but contracts towards Newcastle, where its breadth does not exceed half a-mile; yet, notwithstanding its narrowness, the waters are brackish above these places. The current of the Miramichi is less rapid than that of the St Lawrence, and the tide rises in a less degree, but, with an easterly gale, it sometimes rises twelve or fifteen feet. Inhabited houses here are 441; families, 582; acres of cleared land, 3660. *There is an Episcopal church; also a Scotch*



church. There is likewise a Secession, a Wesleyan-Methodist, and a Catholic chapel—each of which is supplied with a minister. Opposite Newcastle, Alexander Fraser, Esq. has a compact steam saw-mill establishment.

The next place after leaving Chatham, that is worthy of any notice, is Bathurst; this place is between the Miramichi river, and the Restigouche, at the bottom of a deep indent in the Bay Chaleur, and in former years was called Nipisiguit Harbour; here a thriving village has sprung up, containing 291 inhabited houses, 361 families, and 2171 acres of cleared land. This village is in the county of Gloucester, and is forty-eight miles from Chatham. There is also a Wesleyan-Methodist chapel, with a resident minister. There is a road leading from Bathurst to Dalhousie; the principal of the county Restigouche, which is seventy miles distant by land; and at the head of the Great and Middle Nipisiguit, form a junction; the village of Bathurst being placed on the Peninsula thus caused. There is an excellent road, nearly level, and in a direct line from Chatham to this place, passing through a country chiefly covered with heath and burnt wood, until you *come within about twenty miles of Bathurst, when a decided improvement takes place; and*

the traveller meets with something resembling a fine country, lying on its promontory to the right, and which is watered by the Caraquet, Pokamonche, Tracadie, Tabusintac, Bartibog, and other minor rivers. Dalhousie has 136 inhabited houses, 140 families, and 2168 acres of cleared land.

RICHIBUCTO, the capital of the county of Kent, which is on a fine river of that name, is a flourishing village. It has 315 houses, with 322 inhabitants, and 4563 acres of cleared land; there is also a Catholic and Wesleyan chapels, with a resident minister to each. It is forty miles from Chatham, fifty miles from the Bend of Petitcodiac, and 145 miles from St John, by Sussex-Vale and Hampton-Ferry.

From this place we proceed to Shediac, which is fifteen miles. The country on its surface is very low and level, not averaging more than twenty-five feet above the level of the water of the Straits of Northumberland. Oysters are abundant on this shore, and their shells are used for manure. The harbour of Shediac is safe and convenient for ships of large size. There are in the settlement upwards of two hundred families of French Acadians. The front of the harbour is occupied by English



inhabitants, and the whole appears in a very thriving condition. At the entrance of the harbour, there are two beautiful islands composed of sand-stone. Shediack is in the county of Westmorland,—contains 278 houses, 310 inhabitants, and 6479 acres of cleared land.

From this place we proceed to the Bend of Petitcodiac. After leaving the postage between Shediack and the Bend, the western extremity of the Petitcodiac passes through a track of fine intervale, enclosed between high embankments that appear to have been washed by the river at some former period. The stream is now confined to more narrow limits, and its formed bed is almost filled with alluvium. At the Bend, there is a considerable village. The soil is chiefly of two kinds—the sandy and the clayey. There are large tracks of marsh on each side of the Petitcodiac, of which a portion has been diked, and is under cultivation\* The land in the neighbourhood of the Petitcodiac, and extending over to the Bay-shore, from which it

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\* The tide rises in the Petitcodiac as follows:—At the “Bend,” common tides twenty-two feet eight inches; highest tides, twenty-eight feet eight inches. At Dorchester Island, common tides thirty-six feet; highest tides, forty-two feet. It is three hours flood before the tide reaches the Bend, and from rushing along the river to the distance of

is separated by the Shepody Mountains, is of a superior quality, and embraces a fine agricultural country. Here is the flourishing settlement of Hopewell. Few parishes in the Province appear to be in a more thriving condition than Hopewell. The broad marsh on each side of the Shepody River, is skirted with fine farms, and a large and rapidly increasing population are clearing higher up the slopes—the bases of which are closely occupied by the older inhabitants and their senior descendants. This extensive settlement possesses a rich soil, and presents a wide rural plain. Such as are fond of fine scenery, will find a view from the mountain extremely interesting, as it commands a sight of a wide range of the eastern district of New-Brunswick, a part of Nova Scotia, and in a clear day, Prince Edward's Island, with numerous bays, rivers, and villages—forming altogether a scene of the most picturesque and pleasing character. There are 132 inhabited houses; 144 families, and 6722 acres of cleared

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twenty miles, it rises higher here above the lowest level of the sea, at Grindstone Island, than it does at Dorchester Island. The difference of the level between Grindstone Island and the Bend, may be estimated as follows,—common tides, forty-five feet four inches; highest tides, fifty-seven feet four inches.

land. The Wesleyan-Methodists have a chapel here.

SACKVILLE is the next place worthy of notice. The greater part of the cultivated portion of this parish is composed of a new sand-stone, which meets and overlays a part of a coal field to the northward. The most abundant soil in this place is a red sandy loam, sometimes mixed with clay or alluvium. It has 329 inhabited houses, 365 families, and 15,924 acres of cleared land. I would here observe, that there are 5000 acres of marsh on the Shepody River. Many acres of this fine alluvial track have been reclaimed from the sea. Such portions of it as have been diked, are of a good quality, affording the best kind of hay, and also crops of wheat.

It is a remark applicable to all the marshes in this country, that after they are diked and drained, they have a tendency to settle and become lower than the banks of the rivers, where the alluvium is rising and becoming more and more compact. The marsh adjoining the upland was found in several instances to be six feet lower than the banks of rivers daily receiving alluvial matter from the tides. From this circumstance, the inner margin of the

march is overflowen with fresh water during a considerable part of the season, and is thereby rendered worthless. The best remedy for this effect, would be to allow the sea to flow in again over certain tracks for a few seasons. This would raise and renovate the sunken ground, and entirely destroy the poisonous plants now covering many of the lots. This plan might be effected by throwing up dikes from the upland, to the present barrier against the tides, and thus track after track might be redeemed. The muddy water of the Bay being introduced, and undisturbed by currents, would deposit its sediment equally according to its depth; and as the lower tracks would be covered deeper than the higher ones, they would receive the greatest share of alluvium, and be raised to the common level.

We trust that the farmers will give due attention to those valuable suggestions, for they are not only founded in fact, but have been proved correct in principle, by ample experience. We are aware that some people are much averse to travel out of the beaten track of every-day life; yet we beg to remind such, that as agriculture has now advanced to the rank of a science, the precepts which are taught by those who have studied the subject, are as

much entitled to our respect and adoption, as those of any other science.

The next place of any importance is Dorchester, the capital of Westmorland. In this place, the soil in general is sandy, and requires the application of lime. There are several thousand acres of marsh on the Memramcook. The several fine farms near the river, and the rugged scenery at its entrance, form a beautiful and very pleasing landscape; 417 inhabited houses; 454 families, and 17,207 acres of cleared land. Much more might have been said about this county, but, suffice it to say, that it contains eleven parishes, and an excellent coal-field, which we shall hereafter notice, with several particulars.

From Dorchester, there is an excellent road to Halifax, also to St John, by Sussex-Vale. Although the land towards Sussex, is, generally speaking, owned by individuals, yet much of it is in a wilderness state, or is again growing up with bushes, and, in some instances, has fallen into neglect, owing to the erection of saw-mills, which have called away the attention of the farmer from the more profitable and certain pursuit of agriculture. The improvements in this part of the country, however, are increasing rapidly, the soil being generally favourable

for it. The soil in the vale is chiefly a rich alluvial deposit; and the scenery, when the traveller gains any elevated place, is highly picturesque. The east extremity of the vale, is divided into two branches; one going in the direction of Salmon River, and the other following the course of Smithy Creek. At the bifurcation, a steep mountain of conglomerate, called Mount Pisgah, separates one part of the valley from the other. The scenery of this district is extremely beautiful. The great valley, with its fertile fields and meadows, shaded by stately elms, and bordered by the thickest alder—its pastures sloping down the hills, surmounted by several bold elevations, intersected by deep ravines and rapid brooks, afford a most pleasing landscape. Three miles eastward of the church, are two salt springs from the new red sandstone, at the foot of a gentle declivity. Near the great road, the quantity of water supplied by each spring, is about fifty gallons per minute; every hundred gallons yield by evaporation, a bushel of salt, which is very pure and free from earthy matter. A small quantity of the sulphate of magnesia was discovered in the analysis of this water, but it is of no practical importance, and too scanty, to produce any sensible effects on the production of the springs.



This vale is not rivalled in the Province for beauty and fertility. I have preached several times in the valley, and always found the people very attentive to hear the Word. There is an Episcopal church. There is, in the parish, 342 inhabited houses; 347 families, and 10,960 acres of cleared land. It is forty-six miles from St John; to Halifax, Nova Scotia, by the Bend and Amherst, 220.

About six miles from the vale, there is an extensive settlement called the Dutch Valley. When I preached at this place in January 1838, I found the people in very comfortable circumstances. From this place there is a very dense wood, in which there is little or no clearing, until about seven miles, then we arrive at the head of the settlement, known by the name of the Irish or Londonderry settlement. In this part, there are about forty families, who have to labour very hard to support themselves. I preached to this people for eighteen months, although I resided upwards of thirty miles from some part of the settlement. It lies in the Shepody Road; the upper part is fifty miles from St John, which is the nearest place for the inhabitants to take their produce for sale. *The land in this part is not worthy of notice, until you come about fourteen miles towards*

St John, which is called Little River, on which there are a number of very fine farms, and so continues until we arrive at Hampton, to which it formerly belonged; but now it is in the parish of Upham, which parish terminates a little above Titues-Mill, and where Hampton commences. About sixteen miles hence there is a thriving settlement called St Martin's, but is frequently called Quaco. The upper part of this village extends for some miles towards Ten-Mile Creek and Tynemouth.

According to the census taken in 1841, the population was 1973 persons, being an increase of nearly 1200 since the preceding census; 513 houses, and thirty-eight in course of erection. Two places of worship, (in the largest I officiated occasionally;) twenty-two saw-mills; 4635 acres of cleared land; 113 horses; 950 neat cattle; 1156 sheep; 867 swine. During 1840, there were upwards of thirty vessels, many of which were built at this place. It is thirty-two miles from St John. From this place to Ten-Mile Creek, there is nothing worthy of notice; it is very thinly settled. At the Creek, there are two saw-mills; and at Tynemouth, about a mile distant, there is an excellent ship-yard. From here, to the Black River settlement, the land is not good.



The settlement at Black River, reposes upon an extensive bed of diluvial sand and gravel, which is situated in the broad, but shallow depression in the rocks. A part of this bed has been worn away by the sea, and a perfect section of the deposit may be seen in the high embankment still meeting the waves thrown upon the shore. The soil is good ; there are upwards of 200 families. It is eighteen miles s.e. of St John. From this place to the Mash, which is about three miles from the city, there is not any thing worthy of notice. There is a great number of acres of cleared land in the Mash. Here is an excellent road which leads to Hampton-Ferry. In the parish of Hampton, there are a number of very fine farms, which joins that of Upham. In this parish there are 276 inhabited houses ; 317 families, and 8914 acres of cleared land.

From the higher grounds of Hampton, the imposing hills of Kingston, with their steep cliffs, and deep ravines, and skirted with a continued line of fine farms stretched along the side of the river, afford a most interesting and pleasing prospect. The whole track of country extending from Hampton to Norton and Sussex (*which I have travelled frequently*) is composed of the red sand-stone and conglomerate.

On this road, for about twenty-four miles, there are several fine farms, and to all appearance well cultivated. In Norton, inhabited houses, 151; families 169, and 5101 acres of cleared land.

At Sussex-Vale, which I have before briefly alluded to, there is a road passes near to Smith Creek settlements, and extends to those of Studholm and Millstream. This road passes through a track of very excellent land, which has been granted to individuals who are fast clearing and improving it. From the Millstream settlement, which I very frequently visited, a new road extends to the New Canaan river. This part is not much inhabited after you leave the lower Millstream, about seven or ten miles. On the left hand of the road towards the Upper Millstream, there are several new settlements called the English, Irish, M'Farlane, Henderson, and Scotch settlements, where the land is good. In these places, I regularly attended during the year and a-half I resided in the parishes of Norton and Upham. Near the New Canaan river, there is much ungranted land, fit for settlement, embracing nearly 20,000 acres; also a considerable quantity of a good quality farther on towards the North River. About twelve miles to the west, *there are two settlements called Springfield, in*

which there are but little land cultivated. These places are situated on Belle-Isle Bay, and is but a short distance from Kingston, the county town. Houses, 268; families, 291, and acres of cleared land 9518.

KINGSTON is the shire town of the county of Kings, and contains nine parishes. It is situated at the head of Belle-Isle Bay. The rock forming nearly the whole of this parish, is composed of varieties of trap, chiefly of two kinds; in one greenstone, in the other feldspar is most abundant, and sometimes crystals of a considerable size. Although Kingston is the capital of this part, there is not any thing worthy of notice. It contains 303 inhabited houses; 321 families, and 7515 acres of cleared land.

At the mouth of Belle-Isle Bay, about ten miles north and westward, is the mouth of the Washademoac, having previously passed two low islands, called Spoon and Long Island, which are formed of alluvial deposit, and are covered with water early in the spring, by which means, as is the case with all the intervales on the river, they are sufficiently manured, and produce an excellent crop of grass. On each side of the Long Reach, between the *Nerepis* Creek and Belle-Isle Bay, the land is

elevated and picturesque, and, generally speaking, is of a fertile quality ; and on both sides of the river, there are wealthy farmers, several of whom commenced with very limited means, but who have rendered themselves independent by the cultivation of the soil,—the intervale yielding them an adequate supply of hay, and the upland producing a corresponding return for the labours of the husbandman, and large crops of corn to reward his toil.

On the west side of St John, called Little River, there is much intervale, exceeding three miles, and surrounded with fine farms ; the country about a mile above which also abound in intervale. There is no ungranted land near the river ; but in the rear of the front lots there is a track containing eight or ten thousand acres of excellent land, which is the New Jerusalem settlement. About five miles above Little River is the Ocnabog Lake. Opposite the Ocnabog, on the east side of St. John, and eleven miles from Belle Isle Bay, is the Washademoac ; near to which is New Canaan, a very extensive settlement.

There is a large track of crown land in the rear, on both sides of the Washademoac Lake, and particularly between its head and the New Canaan settlement, where there are but few in-

habitants, and where most of the land is ungranted, even to the margin of the river, which is, generally speaking, a rapid stream of about eight or ten roods wide. This land is well adapted for cultivation, and in many places is covered with a dense forest of pine, spruce, and birch, with many valuable sites for mills.

Between the New Canaan settlement and North River, (a branch of the Pititcodiac) there is much ungranted land of a good quality. On the banks of this river, there are numerous and extensive tracks of intervale, and it is a well-settled country, having been peopled during the last forty years. The soil on the upland is highly fertile, and there are natural meadows that afford abundance of pasture; in fact, the natural advantages of this section of the country are great on both sides of St John river, abounding, as it does, with timber, building-stone, coal, and other minerals, rendering it a desirable location for emigrants, and requiring nothing but the industry of man to place the settler in comfortable circumstances, and develop its valuable resources.

About six miles above the mouth of the Washademoac, on the same side of the river, is the entrance of the Jemseg, a sort of natural *canal*. There is a settlement extending up Sal-

mon Creek. Salmon River, like Coal Creek, has its rise in extensive swamps, and about forty-five miles from where it empties into the Lake. The soil in this direction is good, and on Salmon River particularly, there is an immense body of excellent land still ungranted. Above the mills, there is not much cleared land on Salmon River, although industrious persons are commencing extensive clearings there, as well as on the Gasperean, where there are several settlements, and a good opening for emigrants and others. A considerable quantity of land has been cleared in the neighbourhood of Newcastle, and the settlers in that direction are rapidly increasing, and converting the forest into productive farms. There are large quantities of ungranted land in this quarter for cultivation, the greater portion of which lies to the north and eastward, but to the westward, between the Newcastle and Little River, which empties into the French Lake, there are extensive tracks of ungranted hard-wood land.

This part of the country will be a most eligible situation for the settlers, as it is expected that the Great Road to Halifax will be opened this year, 1840, and making the distance from Fredericton, the capital of the Province, only about thirty miles. There are roads meeting



from the lower part of Sheffield, and also from the upper part of Waterborough, on the St John, to Indian Point, and thence up the north side of the Lake, and two others from below Jemseg, on the south side. These all concentrate at the bridge at Salmon River—whence the traveller can proceed to Fredericton, Miramichi, Richibucto, and Westmorland. Much of the eastern, and the lower part of the west side of Grand Lake, are well cultivated, and at the latter point, there is a fine settlement called the Scotch settlement, containing several excellent farms, and a thriving population. The shores of this Lake also possess great natural advantages, and vast mineral resources. Near the head of it, there are extensive coal-fields, several of which are worked by the persons on whose land they are situated, and large quantities of that mineral are every year dug and shipped to St John, which is preferred by smiths for the forge; while another quantity is well adapted for the use of families. Some idea may be formed of the resources and importance of this section of the country, when it is understood that there are fifteen saw, five grist, and two oat mills, on the shore of this Lake, and its tributary rivers and streams.

In a word, the local advantages of this Lake

are not to be surpassed in the Province, whether we consider its great native meadows at the head and foot of the Lake, as well as in many other parts; or its plentiful supply of herrings, shad, bass, and salmon, that formerly were taken in great quantities, and which are still to be found in sufficient abundance, to enable the farmer to add materially, and at little cost, to his annual store of provisions. There are also thousands of acres of ungranted land to be found at a short distance from the shores of Grand Lake, and up the streams, which abound with timber of the best description; while in no part of the Province will a more kind-hearted and hospitable people be found to welcome the homeless stranger, or encourage him in his course.

The lower part of Grand Lake is connected with the Araquapit and French Lakes, by means of a water communication, called the Thoroughfare. There is a large body of good land also in this direction, and a number of settlers scattered around their shores. These Lakes, and the country in their neighbourhood, will be more fully described when I come to speak of Sheffield, where there is a fine track of alluvial land lying in the front of them, on the east side of St John. In the meantime, we will retrace



our steps to the mouth of the Jemseg, and cross over to Gagetown, on the opposite side of the river. Eight miles above Ocnabog is Gagetown Creek, which runs up above five miles. In this part, it is stated, there is the greatest quantity of red and white pine timber, that has yet been found on the western side of the river. At a short distance from the mouth of the Creek, is Gagetown, the shire town of the County of Queens. There is, at this place, an Episcopal Church, also a Wesleyan-Methodist chapel—a court-house, jail, and a grammar and two parish schools. Inhabited houses, 117; families, 133; acres of cleared land, 3825.

A very extensive track of valuable land lies between Gagetown and Nerepis, about half way between Nerepis Great Road, and the River St John, which comprises several thousand acres; and were a proper line of road surveyed, and lots numbered on both sides in squares or hamlets, where settlers would make their selection, it is probable every lot would be applied for in a short time. Those who have examined this track of country, have made the most favourable report of its advantages; they represent the land to be of the very first quality, well timbered with rock-maple, black birch, *elm*, and oak, of as large size as that in the in-

tervale, on the margin of the river. It is also very free from stone, and well adapted for agricultural purposes, with excellent farm sites. This track is seven miles from Gagetown. A more desirable location for settlers, therefore, cannot well be found in the lower section of the Province, being contiguous to the river, and near a good market. Immediately after leaving Jemseg, (which is a very beautiful stream, being a sort of a natural canal which connects the Grand Lake, and those that communicate with the river St John. It is very deep, and at its mouth, is separated by islands of alluvial deposit. The stream itself is five miles and a-half long; but just above its junction with the Grand Lake, there are extensive flats, through which it is intended to open a channel of twelve feet in width,—the present shallow passage materially affecting the navigation through the Lake, and consequently, the intercourse with St John and Fredericton, which, owing to the general prevalence of coal around the shores of the upper part, ought to be one of profit and reciprocal advantage,) and by keeping the river road, you arrive at the extensive village of Canning, in the rear of which, are extensive meadows, and a lake, called Black Lake. Inhabited

houses, 120; families, 128; acres of cleared land, 3356.

The next settlement of any importance is Sheffield, which also extends on the margin of the river, upwards of ten miles. This may be called the "Garden of the Province." It is in the parish of Mangerville. Towards Fredericton, it becomes more elevated, and possessing a less productive soil. The entire front, however, from the mouth of the Jemseg, below Canning, to the centre of Mangerville, is one continued bed of alluvial deposit. There is a church here. Inhabited houses, seventy-nine; families, eighty-five, and 2205 acres of cleared land. In the rear of this track of country, which presents a succession of farms, fronting on the river, with houses situated near each other, the land is low and swampy until you reach the high lands, about two miles back, and is a continuation of the natural meadows, extending below Canning.

Property in this section of the country is very valuable, frequently selling for £30, an acre, near the river. The lots, however, extend a considerable distance in the rear, where it is of less value on the Maquapit Lake, which lies in the same direction as Grand Lake, from north-east to south-west. There are from twenty-five

to thirty farms on this Lake, on some of which are two or three families. But to return to the river.

The shore of the river is planted with low trees and bushes, to prevent its being washed away by the floods of spring, when the waters of St John rise to the height of about fifteen feet. The bank of the river at Mangerville, is probably twenty feet above the level of the river when at its ordinary height during summer. A log that was found at that place last year, (1839) was at the same depth from the surface of the bank, and, it may be presumed, was formerly left there, by the retiring waters after a periodical fall, the subsequent deposits having buried it, but with which the present yearly accumulation of soil can bear no comparison. This place is seventeen miles from Fredericton. Twelve miles below Fredericton, above Saw-Creek, the Oromocto River flows into the river St John. The country on the river between those places being well settled on both sides of the banks, the soil on the banks of the Oromocto below the junction of the branch streams, generally speaking, is totally unfit for settlement, as a great part is low and marshy, and is annually overflowed; but there are extensive wild meadows that afford an ex-



cellent substitute for English grass in case of failure of the fodder.

On the South Branch, there is a considerable quantity of good land, both occupied and unoccupied; which runs through a beautiful and level track, called "The Valley," which is equal in richness of soil and productiveness, to the best part of Sheffield.

At the mouth of the Oromocto, on its left branch, there is a fine body of intervale, extending about a mile on the river St John, and opposite to it is Oromocto Island, formed of alluvial deposit, but which is not inhabited, the lots being owned by persons residing on the mainland. There is a church and meeting-house at the village, on the right hand. There is a very good road near the river, from the Oromocto to Fredericton, a distance of twelve miles, with a number of fine farms on each side of it, and considerable intervale.

Two steam-boats, until last summer, have run regularly between Fredericton and St John, leaving Indian Town (two miles from St John) and Fredericton every morning at seven o'clock. The fare is very reasonable—*ten shillings* in the cabin, and half price forward. The night boats are also a great convenience, leaving Indian Town and Fredericton every

evening at six o'clock, and arriving at their destination early on the following morning.

I would advise persons who are not pressed for time, to take passage in the day-boats, (which was always my custom) by which means they will enjoy a view of the scenery of the St John, which is admitted by most travellers, not to be exceeded by any thing of the kind in Europe or America, and which I shall notice in another part of this work, as I have frequently had the pleasure of viewing it in passing to and from the seat of Government.

From Fredericton to Woodstock is quite level for about five miles, when it ascends, and proceeds along an elevated track of country, passing several excellent farms, and a large body of intervales and islands of that description, which for a great distance are concealed from the view of the traveller, until at length Sugar Island and others at Keswick Creek, open upon his view, and present a panorama, which, for richness and beauty, is not to be exceeded in the Province. The land, over which the road extends, is of considerable altitude; and, underneath our feet, as it were, is spread out the beautiful level country, at the entrance of the valley of Keswick; while the ridge of that name in the rear of the Bluff, facing the river,

extends away on his left, until it is lost in the distant forest that bounds the horizon beyond it. Opposite Keswick Bluff, there is a large body of *intervale* on the right bank of the river, which has been produced by some counter current when the river was at a higher level than at present, similar to that which deposited the strata upon which Fredericton is built. There are several fine farms, forming a settlement that is called French Village.

A few miles beyond it, there is an Indian village, consisting of houses built for the Aborigines of the country, and which they inhabit; still retaining, however, their native, wild, and untameable, yet inoffensive disposition. There has been considerable improvement made on this line of road, with a view to confine the post communication to Woodstock on the side of the river, but from just beyond the French Village, it passes through much poor land, that which is not occupied possessing little inducement for settlers, until it reaches Longs, sixteen miles from Fredericton, where at present the road crosses a rapid and dangerous ferry, and is carried along through Queensberry and Southampton, on the opposite side of the St John to Woodstock. On passing through the parish of Douglas, which lies near Keswick,

there are a number of fine farms on each side of the road. An improvement has of late been made on this line.

On both sides of the Keswick, there are large bodies of intervale, with about 100 fine farms, with a numerous population. This is a fine farming country, and is well adapted for pasturage, or raising grain. It was subject in former years to early frosts, but as the Province becomes cleared, they are less frequent. During the past year, large quantities of excellent grain have been raised in the vicinity of Keswick—one individual alone having obtained a hundred bushels from five of seed.

Keswick Ridge commences at the Cross-Roads, as they are called, and runs in a north-west direction. It is five miles in length, and one and a-half wide, lying between Keswick-Creek and the Scotch settlement. The Ridge is an elevated district, and is composed of good land, well adapted for the cultivation of trees. There are a number of good farms on the Ridge, two places of worship, two excellent schools, and others, in various parts of this interesting portion of the Province.

About three miles from Scotch Lake, is the Scotch Settlement, consisting of about twenty families. The land is good in this settlement.



but is chiefly owned by the New-Brunswick and Nova Scotia Land Company.

About twenty miles from the seat of government, on the western side of the river, close to Longs, commences the parish of Prince William. The land near this place is not favourable for agriculture. Inhabited houses in Prince William, 149; families, 151; and 3320 acres of cleared land.

The next place worthy of notice is the town of Woodstock, which is composed of three villages. At the lower village, which is termed the Corner, the road turns off at a right angle, and passing through Richmond, where another crosses it, forming what is called Scotch Corner, it extends to the American Post, called Houlston. The Boundary Line, as at present existing, passes within sight of this place, which is commanded by an elevated ridge, called Park's Hill. The second village, at the Creek, is connected with the lower village by a bridge that crosses the Meduxnikik; the third is about two miles beyond it, where are the court-house and gaol, and residence of the High-Sheriff of the county. There are a number of good buildings and stores at Woodstock, also a *branch of the Commercial Bank* is established. *Woodstock* is forty miles from Fredericton, and

is the capital of the county of Carlton. It contains 482 inhabited houses; 520 families, and 9757 acres of cleared land.

A few miles northward of the Meduxnikik, and extending up the river, is the settlement of Jacksontown, which embraces a very superior track of country, which is laid out in tiers, parallel with the bend of the river. There is a large population in Jacksontown, among whom are many independent farmers. The road from Woodstock, as has already been observed, passes through this settlement, and cross roads from the river intersect it at different places. The former is expected to become the main post-road in this quarter; and travellers will thus avoid several bad hills that are on the line in front. At present it extends, and will continue to pass through the Williamstown settlement, where that of Jacksontown terminates. The road through Williamstown settlement passes over a most fertile and level district. The land between the river and the Williamstown and Jacksontown settlements is of excellent quality, and embraces the parishes of Wakefield and Wicklow. Inhabited houses, 330; families, 355; acres of cleared land, 6650. In that of Wicklow, 115 inhabited houses; 129 families, and 2500 acres of cleared land.

Nine miles from Woodstock, the road from Jacksontown, in which those from the different tiers in that settlement concentrate, intersects the present mail route in front of the river. Near the white meeting-house at Wakefield, five miles from this, there is an elevated track of country, commanding a fine view of the extensive intervalle on the opposite side of the river. The upland in this section of the Province, extending beyond the Boundary Line to the westward, is of the most fertile character.

On the Pekagomik, there are excellent settlements; some farms have near 100 acres of cleared land. In the rear there is abundance of ungranted land, although much that has been cleared on each side has not been granted. Near the Shiktahawk, and the Munquad, there is a great quantity of ungranted land. Thirty-six miles above Woodstock, the land is of a superior quality, but that near the river is taken up. At the mouth of the River de Chute, there are Falls of about eight feet perpendicular height, that prevents boats from ascending.

**Forests, Soil, Natural History, &c.****CHAPTER IV.**

Remarks on the Forests, their Growth—Different kinds of Wood growing in the Province—Maple, Sugar, and the way of obtaining it—the Hackmatic, its quality and purposes—the Soil—Intervale—effects of Fire on the Forests, &c.—Manure—time of Planting—Manner of Reaping.—Objects of Natural History—the Moose, its size, nature, and quality—the Caribou, its size, nature, &c.—the Bear, its colour, size, nature, &c.—the Otter, Fox, Mink Fisher, Woodchuck, Racoon, and Porcupine—the Beaver, the manner in which they build their houses, and the means they make use of to escape from their enemies—the Muskrat, and the Squirrel. Fish, Whale and Shark species, bony and castilagenous, found in the waters of New-Brunswick.

THAT the forest growth which clothes the surface of the British Provinces is not primeval, I am convinced of, by a number of concurrent circumstances; and that it has been devastated at intervals, is not only congenial to appearances, but in accordance with the traditions of the Indians, and the relations of the earliest settlers. A great number is still living, who

can recollect a terrible conflagration, which commenced its ravages in the State of Maine, and only ceased its destructive influence at the river St John, destroying nearly the whole forest between the south-west branch of the Oromocto, and the Bay of Fundy. That territory was, until the fire of 1825, overspread with a thick growth of all the different forest trees—the pines of which attained the height of eighty feet, with a thickness of eighteen inches.

Around the Grand Lake and the Washademoac, a growth of trees is seen somewhat larger than those above described, but which clearly shews the effects of fire upon the soil, not greatly anterior, and it is highly probable, that the same fire which desolated the shores of those lakes, extended its ravages south-eastward to the Kennebeckasis, and upwards on the banks of that river to its source. Modern visitations of so awful a description, are more apparent, and more easily traced; but vestiges of those which occurred in former times, are sufficiently distinct to prove, that the most tremendous in extent occurred long before the Province was settled. But the damage occasioned to the timber, which was the only loss incurred in those times, was of incalculably less value than the consequences of those of late oc-

currence, which, at one fell swoop, and electrical suddenness, consumed the labours of a life, and closed the existence of many.

The distribution of the forest is not such as an Englishman, accustomed to the cultivated woods in his own country, might reasonably imagine; instead of being tastefully intermingled in accordance with the reveries of St Pierre, nature has disposed the growth generally in stripes, ridges, or groves—the deciduous trees, for the most part, by themselves, and changing suddenly, often with scarcely a shade of admixture, to an evergreen growth. The great distinguishing denominations of wilderness land, as usually understood throughout North America, are hard-wood and soft-wood land, and barren plain. The hard-wood are the ash, beech, birches, maple, oak, and all the deciduous trees. The soft-wood, are cedar, hemlock, spruce, pine—the larch, (though not an evergreen) included.

From the Maple, the inhabitants extract a great quantity of sugar, which is very easily obtained for domestic purposes, and even for sale, from 3*d.* to 4*d.* per lb. The method of producing it is, by making an incision in the tree, about an inch and a-half deep, by two inches wide, from which the sap of a saccharine nature runs off into small troughs, and from



them is put into boilers on a slow fire; the longer this gradual boiling is continued, the more refined will be the sugar. When finished, it is poured into pots, and when cooled, is harder than loaf-sugar. The skimmings make excellent molasses. A good sized tree will, at an average, produce six pounds of sugar without being exhausted, and will continue to do so annually. Those useful trees abound in the Province; I have known several families make from twelve to twenty cwt. in a season. I have frequently seen the inhabitants extract the above. The working class of people use it on account of its being so easily obtained, and that upon their own land.

The Hackmatic is considered by some as an inferior species of pine, peculiar to the British Colonies, and which is extensively used in colonial built vessels, is essentially the "Larch" of Europe, and that the difference that exists, if any, are solely attributed to climate or soil; and that, therefore, for the various purposes of ship-building, for which larch is applicable, Hackmatic is so likewise, and moreover, that the larch is one of our most valuable timbers for naval purposes.

Larch is termed—*Pinus Larix*, *Pinus Pendula*. *Lamb.* *Larix Americana*. *Michaux.* *Epi-*

nette Rough, by the French Canadians. Hackmatic or Tamarack, by the American and English settlers. It belongs to one of the sections of the pine tribe, but by a similarity in cones and wood, seems to be allied to the cedars, from which it differs in not being an evergreen. The leaves in bundles and desiduous; cones, oblong; branches, pendulous; wood, exogenous; timber, shewing very little sap; wood, bark rough, approaching that of cedar.

The Hackmatic grows generally throughout the north-eastern States of the Union, and British America, but it is found in the largest quantities in this Province, Nova Scotia, and Prince Edward's Island. The name, no doubt, is of Indian origin. The timber is straight-grained, fitting it for small spars of ships; the main-mast of a vessel of 350 tons, have been made of it. It works roughly—is rather given to warp—is hard, strong, and very durable. In the colonies it is generally used as a building timber, both for houses and small craft; it is particularly approved for knees to fasten the beams of ships, the butt of the stem, and one of the principal roots forming the angle required. Treenals made of it, are also considered to be of a very superior quality.

It is not a timber of commerce, nor is it con-



verted to any extent, but for house and ship-building in the Colonies. It is sometimes sawn into deals, but never shipped as Hackmatic deals, being occasionally called juniper, or red-spruce, though more generally confounded with spruce and hemlock, and shipped as inferior goods. Hard working and warping deals, however valuable on the score of strength and durability, are not valued in the home market, where softness of grain, freedom of working, and absence of warping, have given a preference to the white or yellow deal of America.

The wood burns with a crackling noise, and though not so easily ignited, as most of the pine tribe, when once blazing, burns with great briskness, giving out a fervent heat, and, therefore, in great request for the fuel of steam-boat engines in Canada and the United States. Colonial vessels built of this wood, are notoriously durable, inferior to none but teak or British oak, and excepting, in one instance, viz. the British merchant, there is no record of such vessels having been destroyed by dry rot, while, in several cases, the oak and other materials surrounding and attached to the Hackmatic, has been found destroyed by dry rot; the larch *has continued perfectly free*. Barren or cariboo plains bear on the peat, which is often

many feet in depth, a few scattered spruces and creeping cranberries, and these parts of the country have as yet received no attempts to reclaim the soil. The land which produces the hard-woods, is generally good, and is brought into cultivation with the least expense, but both kinds of growth are sometimes found intermingled; and where the wood is large and thrifty, this soil is known to be the best for the varied purposes of the settler. Land covered with a growth of spruce or pine alone, is seldom found to repay the outlay of the farmer. High land entirely covered with beech, generally proves gravelly, cold, and hungry soil, and every way less desirable for the settler than many kind of swamp. Clay generally predominates in a cedar swamp, the closeness of which soil, by offering to the spring, confers an imperishable bed, which affords to that evergreen the moisture it loves. This a new settler disapproves of; but if he can afford the outlay of capital necessary for clearing it properly—particularly if the colour of the clay incline to redness, and turn up the surface to the joint influences of the summer sun and winds, and the winter frosts and snows, it will be found to repay his labour in a far greater degree than hard-wood upland.

Land of an alluvial origin, is generally over-spread with a growth of elm, maple, birch, and with a few thrifty spruces and firs; and where this growth is found, particularly if butternut trees be interspersed, the soil is invariably of the best quality. The elm and the butternut delight in the alluvium of rivers, and they seem to be the favourite, and almost spontaneous production of that kind of soil; but in some parts of the Province, particularly on the butternut ridge, at the head of Washademoak river, and the settlements of Richmond, Jacksontown, and the High Plains, which characterize in so peculiar a manner the right bank of the river St John.

A thick growth of alders is the produce of a vegetable soil—the creation of moisture and fermentation, and is highly productive of the natural and artificial grasses; but the sub-soil is frequently a bed of sand, or some other barren formation. The alluvium formed by means of salt water, is, in this Province, of two kinds. The most extensive, and by far the most valuable, are the clayey formations on the estuaries of the rivers which disembogue into the head of the Bay of Fundy, created solely by *the deposition of mud*, which every returning *flood-tide* bears in solution; and these heavy

lands have been reclaimed from the dominion of the sea, by lengthy and expensive embankments.

It will be necessary to inform those in the Mother Country, that the land which he understands by alluvial or diluvial, when found on the banks of fresh water rivers and streams, is universally called in America *intervale*; but the marshes washed by salt water, retain the same appellation here as those at home.\*

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\* *Intervale* is a term peculiar to America, and denotes that portion of land which is composed of the alluvial deposit of large brooks and rivers, when swollen by rains in the spring and autumn. It occurs in almost every county in the Province, and is sometimes found covered with a long natural grass, several feet in length. The quality varies according to the size of the stream, brook *intervale* being generally preferable to that on the banks of rivers. It produces grain of all kinds, but is not so suitable for pasture as many tracks of good upland. Of the quantity of *intervale* contained in the Province, no account can be given, nor is it easy to form a conjecture, much of it being yet in a state of nature. *Interval* is, doubtless, a word of English origin, to which a new meaning has been assigned. The land which is now known by that name, is almost the only part of the forest which has large intervals, or large spaces between the trees. These spots may, in very many places, be cultivated without the aid of the axe, and indicate at once the value and fertility of the soil. These intervals are no where to be found but in low alluvial grounds, which, in process of time, *have drawn to themselves the peculiar appellation of interval land*. It has been supposed by some to be derived from

MARSH.—This land is also composed of alluvial sediment, consisting of the drainings of the upland of putrescent matter, and saline particles, deposited by rivers after their juncture with the salt water. In its natural state, it produces a strong, coarse, aquatic grass; but when inclosed by dikes, and well drained, is exceedingly fertile, yielding, for several years in succession, abundant crops of wheat, and alternate rotations of hay and grain, without the aid of manure. The method of giving fertility to soil, consists in dividing and breaking its particles.

This is effected in two ways,—*first*, By fire; *secondly*, By tillage. The former is adopted by the new settler, who burns the wood upon the soil where it grows; and the other, by the occupant of cultivated land. These two classes of people constitute the agricultural part of the Province, and a sketch of the mode pursued by each, will convey a just idea of the husbandry of the country. As the surface of the earth, in

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the Latin *inter* and *vallum*; but besides the objection to this conjecture, that intervals do not necessarily occur between hills, we may also suppose, that settlers in the wilderness are not apt to use Latin compounds, where there is no appropriate word in their own language. It is written *interval* and *intervale*.



its natural state, is covered with timber, the first step towards cultivation is its removal, which is accomplished by cutting down the trees. There are two seasons in which this operation is performed—late in the autumn, and in the month of March—each of which has its peculiar advantage. The first is a period of the year, when the employment does not interfere with any other duty, and is recommended by its depriving the stumps of trees of the power of generating sprouts.

The latter is generally preferred on account of its accelerating the effects of the fire, of the length of the days, and of the ease with which the wood is then cut.\* If the wood be cut in March, the fire is applied to it about the latter end of August, when the ground is generally fitted for the reception of winter corn; at the same time that the grain is committed to the ground, grass seed is also sown, and the land continues under the scythe, until the removal of the stumps admits of the application of the plough. The progress of decomposition in the roots of trees, varies according to the species of wood. Pine and hemlock resist decay for a great length of time, but, in general, land may be prepared for tillage in five or six years. *It is admitted that the first crop of grain from*

good soil, will repay to a settler all the expense connected with the clearing of the ground, the purchase of seed, and the erection of fences. The grain, notwithstanding the obstruction of stumps, is easily harvested, and the grass that follows, gathered with less difficulty than might be supposed.

The operation of cutting the grain, is much facilitated by the use of a "cradle," which is a machine of American invention. It is composed of a scythe, and its handle, with the addition of a few light bars of wood, placed parallel with the blade; the straw is severed with this instrument, and as it falls behind the scythe, is received by the frame. The mower, by a dexterous movement, which can alone be attained by practice, disencumbers the cradle of the grain, and deposits it at his feet, as regularly, and much more expeditiously, than if it were reaped. But wheat and rye do not invariably constitute the first crop upon new land. Turnips, indian corn, and potatoes, particularly the latter, often precede grain, and as the calcination of the soil changes the nature of its productions less than manure, they are much superior in quality, than when raised upon land which has been long cultivated. At the end of the second year, the settler is in a condition to

keep a stock of cattle, his grain having been succeeded by hay. Additional clearings, while they supply him with wheat and potatoes, add also to the extent of his pasturage and hay land; and at the expiration of six years, the piece of ground, first cleared, is in a suitable state for the eradication of the stumps, and invites the commencement of tillage. When his farm is thus situated, and the fire and the plough are both in operation at the same time, it is said it is more profitable than any old land of the same extent; the soil is not only in its virgin purity, and free from the contamination of weeds, but in full vigour, and its productions are less liable to casualties—better in quality, and more abundant. As few farms are regularly divided into fields, each of which receives in its turn a prescribed course of treatment, the land generally remains in grass until the failure of the crop indicates the necessity of a change. The period of sowing differs according to the season and soils, but, in general, wheat and oats are sown in April. Indian corn is planted according to the local circumstances, at any time between the 14th of May and 6th of June. Barley and buck-wheat are sown about the 3rd of June, and turnips about the 15th of July. Mowing commences about the 28th of July.



reaping begins about the middle of August, and is finished in September.

In a new country, the value of manure is not so much regarded. The luxuriant power of vegetation in the virgin moulds is such, that artificial aid is deemed superfluous; and it is not until after its fertility has been either diminished or exhausted, by repeated and injudicious cropping, that recourse is had to art to restore its vigour. Hence dung, as it is the most obvious and the cheapest, so it is the most common manure. It is only for the last sixteen years that composts and lime have supplied the deficiency of the barn-yard. In a few places, bordering on the basin of Minas, the alluvial deposit of the rivers is applied as a superficial dressing to grass land. Sometimes it is incorporated with the soil, by the plough, and amply repays the labour and expense of its application. One of the greatest difficulties experienced in rural affairs in this Province, arises out of the rapid progress of vegetation, which limits the time for planting and sowing to a very short space; and if any irregularity occurs in the weather at those periods, it not only requires great exertion, but occasions these labours to be performed very imperfectly; from the same cause, the different branches of har-

vest are often crowded together in the most inconvenient manner, producing in some instances, additional expense, and in others serious damage to crops. This rapidity of growth affects the quality of both the hay and the straw, neither of which are so nutritious as the same productions in England.

AGRICULTURE.—Soils are most frequently composed of the following earths, mixed in different proportions,—silica, (flinty) alumina, (clay) lime, magnesia, and the oxides and salts derived from the decomposition of metallic and other mineral matter. To these are added, the different parts of vegetables in their several stages of decay. The presence of some of these substances is absolutely necessary to vegetation; others exert an influence hostile to the growth of plants, when they exist in any considerable quantity, and the predominance of either of the earths, withholds from vegetables that kind of nourishment they require for their perfect growth. It has been ascertained that the most productive soil in all countries, and under the different climates, is one composed of different proportions of siliceous (flinty,) calcareous (marly,) aluminous (clayey,) earth in a finely divided state, and containing a greater or less

quantity of vegetable and animal matter, returning to a mineral condition. It would be impossible to point out the exact proportions of these substances which should be present, under all circumstances, for general productiveness. These proportions must be regulated by climate, temperature, and more especially, by the peculiar nature of the plant it is called upon to nourish. But this general fact is so far applicable every where, that when the soil is found to be composed almost altogether of one or two of those earths, to the exclusion of almost every other kind of matter, it may, from a knowledge of the circumstances, be greatly improved, and its fertility increased fourfold.

By pursuing this inquiry into its minutest ramifications, the quantity of each earth may be so adjusted to all the conditions of climate, situation, and the laws affecting the distribution of plants, that the greatest possible harvest may be reaped from lands which, in their natural and depraved condition, were barren and unfruitful. This constitutes the science of Agriculture, that ennobling branch of industry which Nature never fails to reward, when her bounties are sought with care, skill, and diligence.

The power of some earths to absorb and retain moisture, is much greater than others ;

and, as water performs an important office in vegetation, those soils which are placed upon declivities, and are therefore quickly drained, require a larger quantity of retentive clay, than such as are placed in lower situations,—where, perhaps, the open sand allows the accumulated rain to escape with greater facility, both by evaporation and absorption. The composition of the sub-soil must also be considered. Should it be impervious clay, the water cannot descend even through a thin stratum. Again, if it repose upon beds of sand, it escapes by a filtration, with great facility.

Almost all upland soils have been derived from the disintegration of the rocks beneath, and frequently at no great distance from them. Even the alluviums can be traced to their birth-place, whence they have been driven by currents still active in their transportation. The greatest fertility of these alluviums has resulted from the continued action of the causes to which they owe their origin. Those mighty operations that spread a covering over the rocks, whereby the earth was rendered a fit abode for man, and his associate animals, are now almost inactive on a large portion of the globe. They have not, however, altogether discontinued their useful labour, nor ceased to

clothe the lower grounds with an annual deposit of finally divided matter, and thus to increase the food of plants for the growing population of each continent and island, according to the demands they make upon the vegetable kingdom for food.

Agriculture, to be attended to with success, must be conducted upon scientific principles,—some knowledge of the plants belonging to the climate and exotics, and the soil capable of producing them most abundantly, must be obtained, before the husbandman can receive an adequate reward for his pains, or rejoice over the fruits of his labour.

In all the different arts, a knowledge of the materials operated upon is considered indispensibly necessary for those whose employment is in them; and it is surprising that the agriculturist, who requires more of this kind of knowledge than the common artisan, should have been so much neglected, and left to discover, by the experience of a whole life, what he might have known in a single lesson. Innumerable are the instances where the seed has been scattered in the sand, and in the clay, and because no crop followed, both were condemned as being barren and worthless; but had those *two different* substances been mixed in proper



proportions, a plentiful harvest would have followed, and the disappointed tiller of the ground would have smiled over the bounties received from Nature's cornucopia.

The different kinds of manure, many of which are abundant in the Province, might be applied with the greatest possible advantage to the soils of every country; but of all these, the excrementitious matter of stables forms almost the only kind used in the country.

Manures are of three kinds, viz. animal, vegetable, and mineral. *Animal*,—excrementitious matter, fish-shells, bones. *Vegetable*,—sea-weed, peat-ashes, soot. *Mineral*,—limestone, marl-marly, clay, alluvium of the sea, (marsh mud) alluvium of rivers (mould.) But the litter of the stabling is almost the only manure in many parts of the Province. It would seem that the Chinese had arrived at a more perfect knowledge of these substances in the support of vegetation than any other people. So essential do they consider manure to be the production of crops, that light soil mixed with fat marl, and formed into cakes, is an article of commerce throughout the empire.

Peat is abundant in the Province, and most of its varieties will afford manure; but it sometimes happens that the low situations where it

is accumulated, have been exposed to earth containing much iron, and where the salts of that metal render it unfit for such a purpose. Such peat may be known by its ochrey appearance, and the presence of "bog" and "shot" ore.

The soil of New-Brunswick is extremely varied in its composition, having been produced by a variety of causes, and from many different kinds of rock. It is, therefore, necessary that those who cultivate it, should previously take an extensive view of all the facts connected with its former and present condition. To this inductive knowledge, experiments should be added to afford those practical illustrations which unite in the mind, philosophical reasoning with absolute demonstration.

The CHEMISTRY which may benefit the farmer, is neither philosophical chemistry, nor the chemistry of the laboratory, but it is what may be called the chemistry of Nature,—those simple and elementary rules which affect the ordinary operations, either of Nature or art, constantly going on before us. Such knowledge is useful to every one, and, sooner or later, its value will become apparent.

Every farmer is in the habit of using *manure of some kind or other*; he spreads over

his land something which causes the plants to grow more vigorously, and yield him larger crops than he could obtain without it. A variety of different substances are used in different parts of the country to produce this effect; what then is the substance or substances which these different manures contain, and on what does their fertilizing power depend? Setting aside, for the present, the mechanical effects which many manures produce, and which are frequently very important, let us briefly inquire what is the composition of the ordinary kinds of manure? The great bulk of manure consists of decaying vegetable and animal matter, dead plants, and a variety of substances of vegetable origin, which, as they formerly constituted living plants, must necessarily contain those matters which plants require. When these vegetable or animal substances decay, for they are very similar in composition, they are in part dissipated into certain gases; there is left, after the escape of these gases, a quantity of dark-coloured charry-looking matter, which is comparatively unchangeable, and besides this, there remains a small quantity of fixed earthy and saline substances, which all kinds of vegetable or animal matter contain. The chemical elements of ordinary manure are certain com-



pounds of carbon, oxygen, hydrogen, nitrogen, sulphur, and fixed salts.

The rotting of vegetable substances in manures, is just the reverse of what takes place when plants grow, as they are gradually separated again into those very substances from which its plants were originally formed. In consequence of the many abundant sources of those gases, which form part of the food of plants, that exist all over the globe, it follows that the air always contain a small portion of them diffused throughout it, and hence plants can always obtain from it the gaseous substances which they require; nevertheless, as the quantity present in the air is always very small, the addition of manures, which yield more of those gases to growing plants than they could otherwise obtain, is always useful. With regard to the earthy and alkaline salts which plants contain, the case is very different; when we remove a crop, we take away a quantity of these salts, and the soil, of course, then contains less of them than it did before. There are not the same means naturally provided to restore to the soil these salts, as there are to restore to the air those gases which are essential to the growth of plants. It is true that fallowing *does, to a certain extent, restore the soil to its*

original state ; but without going into that subject, it is evident that it is even more important to supply saline, than gaseous matter to plants. Both are important elements of manure, but the former is the most important, because the natural means which exist for keeping up a regular supply of them to plants, are less complete than those which regulate the formation and distribution of the gases.

The old chemists of by-gone times used to marvel greatly whence animals obtained the earthly substances which constitute their bones ; it is now known, that all animals who feed on plants obtain the phosphate of lime, which constitutes the greater part of the bone from plants. All plants contain phosphates of lime and magnesia, hence these are important constituents of manure.

The manufacture of pearl-ash and potash from plants, has existed for a very long time. Plants are burnt merely for the sake of their ashes, which being rich in potash, are valued as a source of that alkali. All plants contain alkali, either potash or soda ; hence salts of these alkalies are constituents of many of the best manures ; and the ashes of plants, rich in alkali, have always a beneficial effect when applied to land. The earthy phosphates and al-

kaline salts, are the most important of the saline constituents of manure.

Looking at ordinary manures, in a chemical point of view, we may divide them into those which supply the gaseous matters on which plants feed, those which supply alkaline salts and phosphates, and those which supply both at the same time. Farm-yard dung is the best kind, and therefore it is adapted for all soils ; it contains all that plants can want. Soot acts principally from the gaseous matters which it supplies to plants ; whilst bones, and more especially burnt bones, may be taken as an example of a manure which supplies earthy phosphates. Bearing these facts in mind, it becomes of the first importance to know what are the cheapest sources of the substances, and how they can be furnished in the most economical and uniform manner.

#### GENERAL REMARKS ON THE FACE OF THE PROVINCE, &c.

THE distinguishing features of the face of New-Brunswick, are the prevalence along the shore of the Gulf of St Laurence, of an almost perfect level, the only inequalities of which are *perceptible on* the banks of the rivers and

brooks, which have, in the course of ages, made for themselves a deep bed ; but advancing into the interior, and approaching towards the St John's river, on the west, and the Restigouch on the northern boundary, the surface gradually assumes a bolder and more elevated cast. On the isthmus formed by the Gulf on the east, and Cumberland Basin and the Petitcodiac on the west, there are no elevations worthy of notice ; and in the whole interior, between that river, northward, to the valley of the Nipisiguit, the inequalities are but inconsiderable undulations, but to the southward of the Petitecodiac, the land rises in lofty and rocky activities, and is broken into abrupt, hollow, and deep ravines. Proceeding westward, from a line joining the mouth of the Anagance, extending through the interior, northward, to the mouth of the Upsalquitch, advancing across the St John, to the Boundary Line of Maine, the inequalities are lofty and abrupt, frequently assuming the character of mountains, and the forest presenting, in an eminent degree, the higher characteristics of soil.

Along the shore of the Bay of Fundy, the spruce growth prevails in the woods, and indeed, the hard blue rock, which there presents an impassable barrier to the mountain wave of

the Atlantic, is covered by so little soil, that none but the spruce can derive any nourishment. But along this line of sterile coast, if the labour of the agriculturist is poorly repaid, nature presents herself to the eye of the astonished traveller, in the most sublime and romantic dresses. The Shepody mountain, near the upper extremity of the Bay of Fundy, the white granite capped heights which inclose the vale of the Nerepsis, the rocky ridges which rise in gradations from the Bay, extending from the Petitcodiac to the Chiputucticook,—the beautiful cascades on the Poulet river, and the Le-Proc—the majestic falls near the city of St John, and the picturesque scenery on the Maguadavic and the St Croix, can scarcely be surpassed in beauty and grandeur in any country, where the exuberance of the natural growth offers a barrier to an extensive prospect.

What a splendid bird's-eye glance, or panoramic view, is seen from the top of a tall pine. Standing on high land, the forest assumes a varied, but beautiful appearance, exhibiting, where the evergreen grows, a deep green tint, and in the deciduous woods, a lighter colour, variegated with all the different shades of green. A picture of such a scene, would present an *aspect of admirable beauty*, particularly in a



part of the country where the surface swells into eminences, and diversify the sameness of the landscape by their oceanic undulations.

The leaves and the woods of the evergreens abound with rosin or gum, which renders them so highly inflammable, that on exposure to the action of fire, the flames immediately ascend to the top of the tree, with a roaring crackling noise. The moss, dry leaves, and dead-wood, which covers the surface of the ground, assisted by the wind, communicates the fire to the other trees, and if the breeze be violent, no human being can anticipate where the raging element will terminate its violence. But the fire seldom commits ravages among the hardwood, owing to the want of materials of a highly inflammable nature, to increase its fury, consequently, so soon as it may have passed through a spruce swamp, and arrived at a ridge covered with a deciduous growth, it is supposed there is a sufficient obstacle to stop its further progress. But in the event of a long continued drought, having dried every rotten wind-fall into touch-wood; and if the fire being attended with strong wind, the sparks and the ignited bark would be driven through the hard-wood ridge, and, in a few minutes, the next evergreen tract would be in a fearful blaze—~~de~~

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structive of the life and vegetation of everything within the bounds of its influence, leaving the trees, and even their limbs standing, but scathed and charred, resembling, in many respects, a vast collection of masts of Merchant vessels in a large port. Fire will continue to exist in every decayed tree, until rain fall in sufficient abundance to penetrate into all its recesses; and until that auspicious event, no one residing in its neighbourhood considers himself in safety.

The effects of fire on the standing timber, is so superficial, that, provided it be cut down and hewed without delay, none but practised eyes can discover the difference between it, and that which may have been cut green; but, after the first succeeding winter, the worm quickly pierces it with holes, and bereaves it of sap, which renders the timber useless. I would here observe, that when the fire has passed through the woods, it will rage there no more till the land be re-covered with a new growth.

The calamity which the inhabitants of this Province have experienced in no lenient degree, constitutes, for the present time, the greatest source of their security. There is a very surprising phenomenon attending the succession of *the young wood*, and that is, in a large tract of



land, comprising many hundred square miles, which has been desolated by fire; it generally happens, that, in the course of two years, young trees shoot up at so vast a distance from living ones of the same species, that it seems impossible for the winds to waft their seeds so far, consequently, it is almost universally believed in this country, that trees are indigenous to the soil, and spring up without seminal origin. The kind of growth which often succeeds the hard-woods, is spruce, pine, hemlock, a bastard species of maple, frequently wild cherry, white birch, and sometimes poplar, but before the fire occurred here, neither a poplar nor a cherry might have been seen for an immense distance.

This hypothesis, at the same time, proves the fallacy of placing entire dependence on the growth of the forest, as a proof of the quality of the soil, and shews, that it is expedient to tear up the moss, and to examine the quality and depth of vegetable mould, in order to discover the real nature of the soil.

The trees, towards the latter end of summer, present a most luxuriant foliage; the flats in many places are occupied by the deciduous kinds, whose leaves, in their decay, assuming every hue from brilliant scarlet and bright yellow, to orange and dark brown—contrast their

varied tints with the deep green of the pines, and produce an effect unequalled by any thing we see in the Mother Country. This splendid variety of foliage, indicates a variety of timber and of soil. The chief kinds of timber, are the oak, ash, cedar, beech, birch, elm, and maple.

In concluding this part, I would here make a few observations on the circulation of sap in trees :—

A certain writer has justly stated,—“ That the trees which, during several months appeared entirely dead, begin gradually to revive, and in the space of a few weeks, will give much more evident signs of vitality ; the buds will sprout, open, and the sweet blossom expand. Though we have observed this revolution at the commencement of several successive springs, we have no doubt been ignorant of the means conducing to this end. The effects which we perceive in spring to take place in trees, and other vegetables, are caused by the circulation of the sap, which begins to move in the vessels containing it, when acted upon by a milder air, and increase of warmth. As the life of animals depend upon the circulation of blood, so does the life and growth of plants depend upon the circulation of sap, which is to them what *blood is to animals*. To effect this, nature has

formed and adapted all parts of vegetables to concur in the preparation, motion, and conservation of this nourishing juice. It is principally by the bark that the sap in the spring begins to ascend from the roots into the body of the tree, and even throughout the year, life and nourishment are distributed to the branches, and to the fruit which they bear."

From the experiments of Coulomb and Knight, it would appear that the sap does not ascend through the bark, but through the wood; and it is well known that a plant continues to grow even when stripped of a greater part of the bark, which would not be the case if the sap ascended through the bark; and those who are in the habit of obtaining sap from the trees, are obliged to carry their incisions deeper than the bark, or they are unable to procure any sap. The woody part of the tree is composed of small longitudinal fibres, extending in spiral lines, closely united together from the roots to the summit of the trees; amongst these fibres, some are so extremely small and fine, that a single one, scarcely as large as a hair, contains some thousand fibrillæ. There is an innumerable number of little tubes, in which the sap circulates, extending through all the body of the tree to the remotest branches, some

conveying it from the root to the summit, and others returning it back again. During the heat of the day, the sap rises through the ascending tubes, and returns by the descending ones in the cool of the evening. These tubes pass through the leaves, which are also supposed to answer the purpose of respiratory organs, and absorb the dew and moisture of the atmosphere; the sap then is distributed through every part of the tree; its aqueous part evaporates by the pores of the vessels, whilst the oily, sulphureous, earthy, and saline particles blend together to nourish the tree, and promote its growth. If the circulation of the sap is checked, if the internal organization of the tree is destroyed, either by a very severe frost, or by age or by accident the tree will die.

#### OBJECTS OF NATURAL HISTORY.

WHEN this Province was first discovered, it abounded with a great variety of native animals. The chase and the fishery were the chief objects of attraction to the early emigrants. Elks have long since disappeared, and the catalogue of those animals which still remain *is not numerous*. They are as follows:—The

moose, cariboo, bear, fox, lynx, weasel, martin, otter, mink-fisher, wood-chuck, hare, rancoon, porcupine, squirrel-rat, mouse-bat, mole, beaver, and the musquash.

The Moose is the largest animal of the forest in this part, and is generally sixteen hands high; he is of the deer kind, with palmated horns, weighing from thirty to forty pounds, which are shed every year, in the month of February. He has no brown antlers; his head is long, neck short, ears large and pointed, and nostrils greatly distended; his upper lip, commonly called the mouffe, is very broad and pendant, his legs remarkably long, his tail short, his withers elevated, and covered with a thick hair like those of the buffalo; there is also a tuft of black hair pendant from his neck; his hoof is cloven, and when he trots, the clattering of it is heard at a considerable distance; his colour is a light grey, mixed with a dark red, his hide is very suitable for leather, being thick and strong, yet soft and pliable; the hair is long and elastic, and is suitable for mattresses; his flesh is blacker than that of the ox, he feeds on moss, natural grass of intervalles, and on the leaves and tender buds of a species of the maple, called moose-wood. When the Indians kill a Moose, they carefully preserve



the sinews, of which they make the strongest cords, and the tongue and mouffe are sold as great delicacies; his gait is an exceeding fast trot, which he is enabled to continue for a great length of time, and his course through the woods is proverbially straight. In summer, to avoid the annoyance of flies, he frequently wades into the lakes, where he feeds on aquatic grasses and pond lilies. In winter they form herds, and when the snow is deep, they describe a circle, and press the snow with their feet, until it becomes hard, which is called by hunters, a yard. Here they remain until the snow dissolves, or until they have consumed all the branches and bark suitable for food. As soon as the snow becomes encrusted in March, by alternate thaws and frosts, the Indians go out in quest of them; by the aid of rackets or snow-shoes, they are enabled to pass over the indurated surface with great ease and rapidity, while the moose, who breaks through the icy crust at every step, with his small and forked feet, wounds his legs, and extricates himself with considerable difficulty and fatigue from the holes—in this manner he is wearied out overtaken and shot.

The CARIBOU.—This animal is distinguished by *having* brown antlers, which are rounder

than those of the moose, and meet nearer at the extremities. It is not so tall as the moose, but of amazing swiftness, and its hoofs being very large in proportion to its legs, it is not easily overtaken. It is customary to lie in wait for them at certain defiles where they are known to pass, or near waters and feeding-grounds, to which they resort; they are supposed to be a species of the rein-deer of the northern parts of Europe. The flesh is very tender, and of better flavour than that of the moose, and the skin is soft and tough, and makes valuable leather. The Indians make use of the tendons for thread.

## THE BEAR.



The BLACK BEAR only is found in this, and the adjoining Province (Nova-Scotia.) He is



larger than the European bear, and has been known to weigh more than four hundred pounds. Although carnivorous, he is timid, unless wounded or hungry.\* He feeds upon nuts, berries, corn, &c., and sometimes sheep, calves, and pigs. He can climb any tree large enough to sustain his strength, or fill his grasp. When the winter sets in, he retires to his den, which is generally a cave or hollow tree, without making the least provision for his support during the severity of the season; here he remains in a torpid state until the return of spring. The flesh is very palatable, and the ham is considered a great delicacy. The Indians frequently anoint themselves with the fat, to prevent the annoyance of the musquitoes and flies, both of which are very numerous, and to avoid those rheumatic affections to which they are rendered susceptible by constant exposure to the vicissitudes of the weather. The skin is the most valuable of any of the native animals; and when dressed with the shag on, is much used as a covering for sleighs, and many useful articles of apparel.

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\* I have been within a few hundred yards of several, when I have been riding through the different settlements, *which I had to visit monthly.*

## THE FOX.



Of FOXES, there are four different kinds,—silver fox, red, grey, and black fox—all of which are smaller, and possessed of less speed and strength than the English fox. I have seen them frequently walk for a great distance, at the edge of the wood, and keeping pace with my horse.

OTTER.—This animal is about four feet long, exclusive of the tail, (which measures sixteen inches,) and is generally about a foot a half in circumference. From its peculiar mode of living and habits, it has been represented as an amphibious animal, but this is not the case. The formation and appearance of its head resembles that of the beaver, but its teeth are like those of a dog; its head and nose are

broad and flat, the eyes are nearer the nose than is usual in quadrupeds, and placed in such a manner as to discern every object that is above them. This peculiarity gives it an advantage when lurking at the bottom of a brook for its prey, as the fish cannot perceive any object that is under them. It is always observed when in chase of fish, to swim against the stream. It lives in holes on the banks of streams, provided with an aperture to admit the air, and for the purpose of retreat, in case of an attack. The colour of the otter is darker than that of the beaver, and is tinged with grey on the breast and belly. It is strong and fierce, and will defend itself with great courage, but when taken young, may be tamed and taught to fish for its owner. It feeds on fish, amphibious animals, poultry, and the bark of trees.

There is also the MINK, which is of the otter tribe, but which is smaller and proverbially black. Its tail is round and flat, and without hair.

The FISHER, sometimes called the black cat, and black fox, is an animal resembling the Martin. His colour is black, with the exception of the head and neck, which are grey. Its length is two feet, circumference one foot, and

the length of its tail twelve inches. It is rare to be met with, and solely taken for its fur.

The **WOODCHUCK** is a small animal of a reddish grey colour, that burrows in the ground like a rabbit. It is extremely fat, and its flesh is eaten by the Indians; it is fifteen inches long, and its circumference is so great, as to give it the appearance of being round.

The **RACCOON** resembles the fox in the size and shape of its body; its head and teeth are similar to those of a dog; it is upwards of twenty-seven inches in length, and its tail is twelve; it is covered with a long, thick, and soft hair, of a brown colour, slightly tinged with grey; its eyes are large, of a greenish colour, and encompassed by a circle of black; its tail is round and bushy, tapering to the end, and annulated with several black bars; its limbs are short—the fore legs shorter than the hinder; its feet are armed with sharp claws, and it leaps with surprising agility. In its manners, it resembles the squirrel; in eating it sits up on its hind legs, and serves itself with its fore paws, immersing its dry food in water before it eats it. It is often tamed, and is to be found in the wigwams of the Indians. In its wild state, it lives in hollow trees, and feeds on the bark, acorns, and beech-nuts; but when domesticated,



will feed on milk, bread, eggs, and is very fond of sweets. It feeds by night, and during the winter seldom leaves its den, from whence it is generally said to live in a torpid state during that period. Its flesh is fit to be eaten, and its fur is preferred by hatters, to all others but that of the beaver.

The PORCUPINE is about the size of a lap-dog, but does not stand so high from the ground. It is covered with long brown hair, interspersed on the back, sides, and tail, with stiff, hollow, white spines, about the size of a wheat straw; these are tipped with black, sharp at the ends, and slightly barbed, and are in general called quills. These spines are the natural defence of the animal, and are so easily detached from its body, as to give rise to the prevailing opinion that it has power to shoot them. I have seen dogs who have hunted these animals, return home with their faces covered with the quills, and which have not only been difficult to extract, but gave great pain when they were taken out. It has four toes on the fore feet, and five on the hind, armed with sharp claws, with which it is enabled to climb trees. The female produces two at a birth; it dwells in hollow trees, or in cavities under their roots. It feeds on nuts, buds, and the bark

and balsam of the fir-tree. Its flesh is palatable and nutritious; and its quills are much valued by the Indians, who die them of various colours, and use them in ornamenting their mochasens, belts, and birchen baskets.

The BEAVER is an amphibious animal, and said to form the connecting link between quadrupeds and fishes. Its length is about two feet nine inches; it has four front teeth called incisors; the two upper truncated and excavated with a transverse angle; the two lower transverse at the tips. They have also sixteen grinders; eight in the upper jaw, and the same in the lower. With the former, they cut down trees of soft wood, such as white maple, white birch, poplar, alder, and willow; and with the latter they break any hard substances. The fore feet are very short, and the toes separate; the hind feet are membraneous, and adapted for swimming. The tail is oval, scaley, destitute of hair, and about a foot in length. The body is covered with soft, glossy fur, of a brown colour, and the skin generally weighs two pounds. The castor used in medicine is found in sacs formed behind the kidneys. Beavers dwell in houses of their own construction, for which purpose they sometimes unite and form communities. These are built

either in ponds or running streams ; if in the former, there is no occasion for a dam, but merely to select a situation which will admit of an open passage from the cellar to the water under the ice ; if in the latter, they select a stream which is capable of being dammed, and having cut down trees suitable for their purpose, they commence making the foundation of the dams, by placing the sticks up and down the stream, and cementing them with mud. When the dam is erected, it receives a final coating of mortar, made of twigs and clay, for which purpose their tails serve as trowels. There is always a sufficient sluice made in the dam to carry off the surplus water. When the dam is built, they proceed to erect their houses ; these they build of the same material, which serves them for food, and in selecting trees for their formation, they are careful to choose those near the water, that they may be floated down the stream, or to cut them in such a manner that they may fall in the proper direction.

Their houses generally consist of two or three stories, and are so constructed, that the upper floor shall be above the level of the highest flood, and perfectly dry. The shape of the building is oval, and the covering is impervious *to the weather*. Their food in winter consists



of the bark of poplar logs and other wood, which they generally provide in the autumn, and sink in the pond near their dwelling-houses. As there are always several breathing holes in the ice, which the Beavers keep constantly open, the Indians select one of these for the position of their traps. A short stake is driven into the ground, to which the trap is fastened, to prevent its being carried off by the Beaver; the trap is then strewed with pieces of willow or alder, of which that animal is very fond,—and in this manner he is generally decoyed. When a Beaver first perceives an enemy, he gives a smart blow on the water with the broad part of his tail, at which signal, the whole family disperse under the water. It is not inconvenient for them to remain a long time under the water, nor is their fur injured, even when the animal is drowned in the traps.

The best fur is that which is taken in February or March; in summer, it is considered much inferior.

The MUSKRAT or MUSQUASH, is an amphibious animal, and resembles the Beaver in its habits. It is about fifteen inches in length, its tail about a foot, and similar to that of a rat. It is less afraid of man than the Beaver, and is

frequently found in ponds and creeks in the cultivated parts of the country.

The SQUIRREL is a lively and active animal, and lives principally among the branches of trees, and feeds on nuts and seeds. Its body is small, but beautifully formed, and the common kind is of a brownish colour, and has a large bushy tail. At the near approach of any person, it makes a very great noise;—this I have heard several times when passing through the various settlements in which my duty called me. They are very numerous in the Province.

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No perfect catalogue of the birds of New-Brunswick has yet been made, they are generally known by their vernacular names, many of which are of Indian origin, and it is difficult to obtain any accurate information on this head.

#### INSECTS.

No catalogue of the Insects of the Province has yet been arranged. Many of them are the same as those of Great Britain, and other temperate climates; we, however, have many spe-

cies which are not found there. Some of the *sepidoplerous class*, are exceedingly beautiful—of these, part fly by the day and a part by night. Of the former, the species are not very numerous, but the latter are to be found in endless variety, of almost every colour, and every mixture of colour.

In this branch of Natural History, the waters of New-Brunswick afford a rich field for scientific research.

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#### FISH.—*Whale Species.*

Bone Whale.	Grampus.	Porpoise.
Black Fish.	Herringhog.	Snuffer.
Fin Back.	Humpback.	Sulphur Whale.

#### *Shark Species.*

Basking Shark.	Dog Fish.	Mackerel Shark.
Bone Shark.	Maneater Shark.	Swingtail & Seal.

#### *Bony and Cartilagenous.*

Alewife.	Haddock.	Salmon Trout.
Bass.	Halibut.	Sale.
Bellows Fish.	Hake.	Smelt.
Bill Fish.	Herring.	Shrimp.
Blue Fish.	Horse Mackerel.	Sturgeon.
Bone Eater.	Horn Sucker.	Sun Fish.
Brook Sucker.	Jaggen.	Sculpion.
Bream.	Lump Sucker.	Spanish Mackerel.
Capeling.	Mackerel.	Squid.

Cat Fish.	Minow.	Shad.
Chub Sucker.	Pollock.	Skate.
Cod.	Placie.	Sea Shad.
Cusk.	Perch.	Sword Fish.
Dab.	Pond, do.	Tom Cod.
Dollarfish.	Pickarel.	Trout.
Flounder.	Salmon.	Wolf Fish.
Frost Fish.	Sauce Fish.	Whiting.

*Eels.*

Congor Eel.	Lamprey, do.	Silver, do.	Sand, do.
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*Shell Fish.*

Blue Crab.	Nipple Fish.	Razor Fish.	Shore Clam.
Cockle.	Oyster.	Scallop.	Star Fish.
Lobster.	Perriwinkle.	Sea Spider.	Sea Crab.
Mussel.	Quahog.	Sea Clam.	Soldier, do.

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These are Thy glorious works ! Parent of good !  
 Almighty ! Thine this universal frame,  
 Thus wondrous fair ! Thyself how wondrous, then,  
 Unspeakable ! who sitt'st above these heavens,  
 To us invisible, or dimly seen  
 In these Thy lowest works ; yet these declare  
 Thy goodness beyond thought, and Power Divine !

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“ *Jehova Domine Noster, quam magnificum est nomen tuum in  
 universa terra.* ” — PSALM viii.

## CHAPTER V.

The New-Brunswick Coal Field—Introductory Remarks—Its Division, Extent, Deposits, Quality, &c.—The Salmon River, &c.—Coal Mines, their Deposits, Quality, &c.—Minerals of the Province—Iron, its uses—Copper Ore—Lead Galena—Magnesia—Limestone—Gypsum—Rock Salt—Granite—Jasper—Calcedony—Amethyst—Agate—Heulandite—Stilblite—Apophyllite—Slates, &c.

IN this Chapter the reader will have an accurate account of the New-Brunswick Coal Field, &c. When the condition of Great Britain is compared with that of other nations, less favoured with coal and the metals, it will be perceived how much mankind have been improved in their moral and secular state, by use of the substances found only in the earth. And when the present happiness of civilized countries is contrasted with the condition of those barbarous nations, whose axe and arrow are made of stone, some idea, even at a single glance, may be formed of the power and wealth which have been drawn from the bosom of this planet. Should

an inquiry be made into the cause of the exalted state of the parent country, and the sources from which her commerce has been derived, and is now supported, it will be found that the vast and various productions of her mines are the chief support of her manufacturing industry, and the great centre of supply for almost every nation upon the earth. When coal is viewed in all its relations to mankind, the mind is filled with astonishment at its effects. To coal, the generation of steam, the multiplied operations in manufactories, the great improvements in all kinds of machinery, the vast saving of animal strength, the diminution of human pain and labour, and the majestic strides of civilization, owe their origin. Coal possesses the power of transmuting ships and land carriages into animals, capable of performing the greatest feats of strength without relaxation or repose. Through its influence, directed to the production of steam, vessels now ply between Great Britain and America, in a shorter space of time than had been ever before anticipated, and the inhabitants of countries far remote from each other, are now brought into frequent and neighbourly intercourse.

Were the bituminous treasures of England *exhausted*, her manufactories would fail, her

trade cease to exist, and the nation would gradually retrograde into a state of ancient barbarity.

When we consider that a large proportion of the power of steam is applied to move machinery, and that the amount of work now done by machinery in this country (Britain) has been supposed to be equivalent to that of between three or four hundred millions of men by direct labour, we are almost stunned at the influence of coal, and iron, and steam, upon the fate and fortunes of the human race. It is on the rivers—and the boatman may repose on his oars; it is on the highway—and begins to extend itself along the courses of land conveyance; it is at the bottom of the mines, a thousand or more feet under ground below the earth's surface; it is in the mills, and in the workshops of the trades; it rows, it pumps, it excavates, it carries, it draws, it lifts, it hammers, it spins, it weaves, it prints, &c. Should the advancement of this power be as rapid during the next twelve years, as it has been during the same term of years that is gone by, it seems as if man would be indulged with a long holiday, having nothing to do but to gaze upon his own inventions, for they are neither few nor small—



“Man hath found out many inventions.”—  
SOLOMON.

Having given a brief outline of the gem itself, with its various qualities, I shall proceed to the mine out of which it can be obtained.

The great coal-mine of the Province of New-Brunswick, which I am about to explain, is situated between the primary rocks on the county of Charlotte, and the King's County, on the Straits of Northumberland, on the Gulf of St Lawrence. Only the south and south-east sides of this coal field have yet been explored; the west, the north, and the north-east sides still remain to be examined, and the limits thereof in the latter directions, yet remain unknown.

The division of this coal-field, situated southward of St John, is the segment of a large circle described between the Keswick above Fredericton, and the Ocnabog, below Grange-town, and touching at Shin Creek, and the head of the Oromocto. Its south-eastern side extends along the trap and syenite rocks of Springfield, and the dividing line between King's, Queen's, Westmoreland, and Kent Counties, *to the Straits of Northumberland, from one of the branches of the Oromocto to the St John, and from thence eight miles eastward of the en-*

trance of the Washademoac. This coal field extends in a northerly direction to Bathurst, a distance of one hundred and twenty miles, and from Bathurst along the coast to Shediac, which may be estimated at seventy miles.

Until the north-east side of this vast coal track is explored, it would be impossible to give an accurate account of its area; but it may for the present be considered equal to five thousand square miles! This track may, perhaps, bear the reputation of being one of the largest coal-fields ever discovered on the globe. This vast expanded track in every part abounds in tropical plants, many of which have evidently been changed into enduring beds of coal, while others have been converted into different kinds of mineral matter, and form the most faithful record of the changes this earth has undergone since it first came from the hands of its Supreme Architect.

To distinguish this extensive track from the Westmoreland district, and other coal-fields in the British Provinces, it is designated by the name of the "Great New Brunswick Coal Field," which, for its magnitude and wealth, will be better known, long after its first geological pioneer has ceased to travel over its surface.

I shall now proceed to give an account of the Westmoreland Coal Field. There is a great difficulty in fixing the bounds of this coal field on account of a part of its surface being covered with new red sand-stone, and other deposits of more recent formation, the strata of which thin off in such a manner as to leave the line of demarcation obscure. It has been stated, that, beginning at the Harbour of Shediack, the Westmoreland Coal Field reaches along the shore eastward to Tedish River. It then extends along an irregular line southward, until it approaches the village of Sackville, and proceeding in a westerly direction, it meets the new sandstone near Dorchester Island—a line drawn from Shediack to the Petitcodiac, about ten miles below the Bend, will mark its northern side. The coal field then becomes more narrow, and, crossing the river, maintains an average breadth of ten miles, as it proceeds in a westerly direction, until it reaches Sussex Vale; here its extremity is forked; one branch is curved towards the north-west, until it meets the source of Studholme's Millstream; the other becomes very narrow, and disappears beneath the conglomerate, a few miles southward and westward of Sussex Church. The longest diameter of *this coal field* is upwards of seventy miles, and

it will average seventeen miles in breadth. It is by no means certain that coal is contained in every part of the area included within these limits, but as the out-cropping of the bituminous strata has been discovered in a number of situations, it is evident that it embraces vast quantities of coal, and is of the highest importance to the Province. It will not be expected from the limited time devoted to the exploration of this coal field, that a full and correct account of its extent, contents, and value, can be given at present. We nevertheless proceed to give such facts as have been discovered, in confidence of receiving that support these pursuits so much require.

The rocks belonging to the Westmoreland Coal Field, are first observable between the upper settlements of Hammond River, and the Kennebeckasis, where it enters Sussex Vale. Here they dip beneath the more recent formations of new red sand-stone and conglomerate, already described, and which rests upon them unconformably, and the detritus common to the surface.

After passing a considerable area, the lines indicating the boundaries of this formation, proceed in an easterly direction towards the parish of Salisbury. On the road leading

southward, and immediately after ascending the high lands of Sussex, the sand-stone and shales appear, and are intersected by the small streams passing downwards to the river. These rocks were examined at the farm of Mr Allen Sheck, and other localities, and their bituminous nature distinguishes them from any other in this quarter. At the latter place, there is a stratum of impure cannel coal, at least three feet in thickness, and, from the quantities of this kind of coal mingled with the debris of the surface, it is evident that it exists in much greater quantities, and of a quality more pure in situations now concealed by beds of sand, and other detrital matter. The carbonaceous stratum burns very freely, and contains a very considerable quantity of bitumen. But the quantity of ashes, after combustion, is almost equal in bulk to the quantity of coal used, notwithstanding its specific gravity is much diminished. The ashes contain much carbonate of lime, and will be found excellent for manure. The out-cropping of the coal may be considered as having been ascertained, extending in a north-east direction from the starting point, and along a distance of six miles; and although the largest and most important beds of coal remain undiscovered, from circumstances already noticed,



yet an advancement is made towards their development. Fifteen miles from the mouth of Pollet River, small seams of coal appear in its bed. The strata here dip northward at a small angle. Coal is also found two miles farther southward, and mixed with the gravel and sand, having evidently been transported from the outer-cropping of some vein in this vicinity, and by the same cause that produced the detritus where it is buried. The coal appearing in small quantities on the surface, at the head of Pollet River, is of the bituminous and common variety, and that it is abundant in the concealed strata beneath, appears very evident, but the almost horizontal position of the rocks, and the wilderness condition of the country, render its discovery very difficult without resorting to boring.

These remarks are also applicable to Coverdale River, and Turtle Creek. These streams terminate in this part of the coal field, and are crossed by its strata, at least ten miles southward of the Petitcodiac, and the same indications of coal exist eastward of the main river.

At the head of Turtle Creek, and about ten miles north-north-west of Shepoddy, the coal again appears at the surface, and may be fol-

lowed along this wilderness track of country several miles.

One Lot, No. 3. the property of Mr William Stevens, and about a mile from a new road and path connecting Hopewell and Hillsbro', a quantity of channel-coal was found in the bottom of a small ravine. Upon closer examination, a stratum, about ten feet in thickness, is seen where the rocks have been uncovered by the water of a brook, but the surface is too thickly covered with detritus, the forest, and decayed trees, to allow of any correct measurement, nor can the dip be ascertained without the application of considerable time and labour.

From the drift coal found in the small brooks and in the soil, it is certain that there are other beds a little farther southward. Coal strata also appears on the next lot, occupied by Mr William Baizley, and upon ungranted lands farther eastward.

That there is abundance of coal in this district, cannot admit of any doubt, and before many years have elapsed, it will be applied to the numerous objects it is calculated to support. Besides being abundant, the coal here is much superior in quality to any found along the outline of out-cropping.

*The bituminous mineral, when taken from*



the surface, where it is exposed to the decomposing influence of atmospheric agents, is always much inferior to that taken from mines.

This coal kindles quickly, and burns with a splendid white flame, affording much heat and light. Pieces taken at the distance of three feet below the surface, are found to possess the fat caking qualities, as they are called. The proportions of carbon, hydrogen, and azote, vary in different specimens. It affords a greater quantity of carburetted hydrogen gas, than any of the imported varieties, and is therefore admirably adapted for lighting buildings and streets. The earthy matter varies in quantity from twelve to twenty-five, per cent. and the ashes contain carbonate of lime.

The out-cropping at the above locality, is within five hundred yards of the trap-rock, and the syenite already described, and which forms a high and steep declivity along its southern side, to the distance of ten miles. A highly bituminous shale that burns with a beautiful flame, is placed beneath, and also reposes upon the coal. In proceeding in a north-easterly direction, the sand-stone and shales of the coal measures cross the Petitcodiac, from ten to fifteen miles beyond the Bend.

On the road leading from the bridge, and on

the west side of the Mamramcook River, and in the high grounds of the Peninsula, the rocks of the coal field are partially uncovered. Nearly opposite Dorchester, four miles from the main road, cannel coal was discovered in autumn 1839.

The first stratum of coal is near a small brook, and is twenty inches thick. The second is about eighty yards farther south, and is twenty-two inches in thickness. This stratum is immediately succeeded by argillo-calcareous shale, capable of combustion. Forty yards still farther south, there is another stratum four feet in thickness, and superior in quality to any other at present discovered here. The course of this stratum is east by south, and the dip is south by west thirty-five degrees. This coal has the hardness of anthracite, but possesses most of the common properties of the bituminous mineral. It ignites readily, and burns with a white lambent flame. When it is first taken from the earth, it is very hard, and slightly sonorous, but by being exposed to the weather for a considerable time, it decomposes down in thin scales. It is of a dark-brown colour, and the best kind is streaked with solid *bituminous* matter yielding an odour, when *rubbed*, like that of carburetted hydrogen. It

retains the heat a long time after the flame has subsided, but the quantity of ashes produced is very great, and containing a considerable quantity of the carbonate of lime. The ashes of the most kinds will afford excellent manure, and rock bitumen enough for calcination. A pound of the best coal from this place, yields four cubic feet of carburetted hydrogen gas, it is therefore like that north of Shepody, admirably adapted for lighting cities. A small quantity of coal has been discovered four miles from the mouth of the Shediac River, and, upon examination, the Westmoreland Coal Field was found to extend to the south side of the harbour of Mediac, the dip of the strata at this place is north twenty-five degrees, east seven.

The rocks from the Bend of Petitcodiac, to the Belleveaux Village are chiefly new red sandstone; and there are but few situations, even in the deepest parts of the ravines, where the strata belonging to the coal series are uncovered; the surface being occupied by the former rock of the detritus derived from it. Some information has been received of indications of coal at Fredericton's Brook, or branch of Weldon's Creek, emptying into the Petitcodiac between its mouth and the Bend. The first indications of coal were observed near a meadow

formed by an ancient beaver-dam, about three miles from the river, and the same distance from its confluence with the Memramcook. The strata are intersected by the stream, and run nearly east and west, with a general dip to the south. The coal was found most abundant above the beaver-dam, and exists in several separate strata, the largest of which is about nine feet in thickness. The quality of this coal is superior to that of the Mamramcook, or Stephen's Farm. A quantity of it was collected and fired in the bed of the stream; it ignited readily, and burned with great splendour. Advantage may be taken of the brook in searching for the thickest beds of coal. In the month of July, the water may be confined by a dam above, and the sand moulders removed at a small expense.

The strata, to the distance of a mile and a half, may be laid bare; and the site where they contain the richer deposits of the bituminous mineral, could be ascertained without difficulty, with the fullest confidence of success in working them.

It is of the greatest importance, in deciding *upon a site wherein to open a coal mine, to determine with accuracy where the greatest number of favourable circumstances exist.* In the first

place, it is necessary that there should be one or more coal strata, of sufficient extent to insure a full supply; and each stratum must be sufficiently thick to compensate the expense of sinking shafts, striking levels, &c. The kind and quality of the coal must be considered, and the demand justly estimated. The consumption of coal must not only be continued, but must constantly increase. The draining of mines adds much to the expense of working them; and, therefore, protection from the influx of water into the adits should become fully studied.

It is but seldom that an out-cropping of any magnitude appears at the surface; and it is necessary, on account of the loose matter spread over the rocks and superficial beds, to bore downward to considerable depths, in order to ascertain where the richest deposits are situated.

#### GRAND AND SALMON RIVER COAL MINES.

From the north extremity of the Grand Lake, the Salmon River, a beautiful stream, extends in a north-east direction, to the sources of the *Richibucto*, emptying into the Straits of *Nor-thumberland*, in the Gulf of St Lawrence. A

the junction of the former stream with the lake, an out-cropping of coal has been discovered a few years since, and has been worked to a limited extent. This situation is peculiarly favourable for mining, and for the transportation of the coal. The River is sufficiently deep to admit vessels of an hundred and fifty tons burthen, and the mines are situated about 300 yards from the landing-place. The stratum of coals already found, is only twenty-two inches thick, and in general, at a depth of eighteen feet below the surface. The coal, and shale, and sandstone, associated with it, are nearly horizontal. A number of small shafts have been opened, and a considerable quantity of coal has been raised within the last four years, viz.—1835–39.

The same coal stratum again occurs at Crawford's farm, a mile and a-half farther northward. It was also opened at this place, and might be worked with considerable advantage. The coal stratum also appears at Barton's Point, Newcastle Creek, Coal Creek, and other parts of this district. At the latter place, and within an extent of six miles, twenty levels have been run into the south bank of the stream. A considerable quantity of coal has been removed, advantage having been taken of the section,



made in the rocks by the stream. These mines are not worked; the thickness of the stratum and shallowness of the river being unfavourable to their employment. At Brown's Mills, six miles from the mouth of the creek, the coal was exposed in erecting a dam.

It also occurs on Newcastle Creek, where it is worked with success by Major Ewing. The produce of this mine is, however, small, not amounting to more than three hundred chaldrons, per annum. Fredericton is chiefly supplied from this quarter. The coal at all the above places, is, in general, of a good quality, but, like almost all superficial strata, the sulphur it contains renders it rather unpleasant for domestic purposes; it is, nevertheless, superior to the imported varieties, for the forges of blacksmiths.

At the before mentioned places, and at others not necessary to be noticed, the coal stratum is from fifteen to twenty inches in thickness, and extends beneath an area of seventy miles in circumference, at an average depth of ten feet below the surface. The coal measures, at the Grand Lake, will supply the demand at a far cheaper rate. When the uniform thickness of the coal—the regularity of its distance above the waters of the lake, and its tributaries, and



also its distance below the surface, the apparent absence of faults, and various other circumstances connected with its quality, horizontality, &c. are considered, there can be no doubt that only one, and that the most superficial stratum, has yet been discovered; nor could it be expected that an out-cropping of the lower and richer deposits would appear at the surface, where all the strata rests upon a nearly level basis; and there can be no doubt that there are other and far richer deposits of coal, beneath the one already discovered, but at what distance from the surface it is impossible to calculate, in consequence of the almost horizontal position of each stratum in the coal series.

The difficulties that prevent successful mining at the Grand Lake at present, are the narrowness of the stratum now worked, and the depth at which the lower deposits are situated. Similar obstacles have frequently presented themselves in England, but they have been overcome by capital and industry. At the period when an attempt was made to explore the deeper deposits of coal at Grand Lake or Salmon River by boring, the surrounding country was unexplored; but during the geological survey, all the formations, from the granite up to

the coal series, have been found where they cross the St John. From these, slate have been obtained, which shew that the coal may be reached at a less depth, near the main river, and sums of money would be well employed in boring at a judicious site, in the neighbourhood of Gagetown, or on the north side of the Washademoak. The result of such an enterprise would be of the highest importance to the Province, and there would be no doubt of its final success.

That there is abundance of this useful mineral in New-Brunswick, is now no longer problematical; for it may be seen in thick strata exposed to the light of day, and only requires a moderate degree of enterprise to bring it to bear upon the demands of the country, and the support of those national energies it is capable of sustaining. As an instance, it may be mentioned, that from the knowledge of the existence of deposits of coal capable of yielding gas in large quantities, a proposition has already been made to light the city of St John from this source; nor can the time be far distant, when other and more important objects will be gained from the mineral wealth of the Province of New-Brunswick.

Before I conclude this part, I would observe,

that the General Mining Association of London, have a lease for sixty years of all the mines and minerals of Nova Scotia. But notwithstanding coal, and iron, and other valuable minerals are abundant in that Province, the Association hitherto has deemed it most advantageous to work only the coal mines of Sidney and Pictou. The Province receives £4000, per annum, or 20,000 chaldrons, Newcastle measure, and *two shillings* for every chaldron raised above that quantity. It is from this source that the whole of the casual revenue is derived.

At Sydney, upwards of 500 men, three steam-engines, and ninety horses, are constantly employed, and during the year 1839, the miners produced no less than 70,000 tons of coal. At Pictou, six steam-engines, 100 horses, and 500 men are employed; and in 1839, 48,000 tons of coal were exported from that place, to the United States, and the British Ports along the coast.

As the demand for coals is rapidly increasing, the Association has not only laid out the great profits arising from the mines, but also other capital. The Company have opened other new shafts, and laid down expensive rail-roads, in *order to meet the increasing demands*. It is

from these circumstances that persons unacquainted with the fact, have supposed that the Association has not realized the interest of the great amount expended; but when these works are completed, they will return great profits. It does not appear that the price of labour has any effect upon the working of the Pictou and Sydney Mines; the scarcity of labour only is complained of; and the miners earn from seven to ten shillings, per day, each, admitting the low estimate of 120,000 tons to be the annual amount of the Sydney and Pictou Mines; the yearly amount of profit received by the Association will be £30,000. It is obvious that the coal mines of Nova Scotia and New-Brunswick are not only of provincial importance, but also the richest sources of the nation.

#### MINERAL DEPARTMENT.

In Sussex Vale, there are extensive deposits of bog iron ore, on the estate of Mr John Jeffries, and other lands adjoining there are accumulations of this ore of great thickness. The oxide of iron contained in the sand, and derived from the decompositions of pyritous iron is washed from the uplands, and during the



summer months appear in a brown and yellow coating upon the stagnant waters, moist cavities, where the only drainage is that afforded by the evaporating power of the sun's rays. These oxides of iron finally become consolidated, and, from their annual increase, they are in many places ten feet in thickness.

The changes produced by the operations of nature, are truly remarkable, *first*, The iron mixed with sulphur, through the agency of volcanic heat, is converted into iron pyrites; this being exposed to the oxygen of the air and water, produces the oxides of the metal, which, by time and pressure, become consolidated. There can be no doubt but that many of the compact ores of the older rocks have been formed in this manner.

Finally, the art of man is exerted to restore the metal to a pure state, and he throws charcoal into the furnace to absorb the oxygen. The sulphur having already entered into new combinations, and the inert matter having passed through many changes, is at last placed on the rail-road—forms the piston of some mighty engine, or forsooth, the polished blade that glitters in the sun-beam, amidst the pomp and pride of war.

*The uses of iron are so well known, they*

scarcely require any farther illustration. This metal enters into all the multifarious operations of civilized life, and the purposes to which it is applied in every kind of labour, are almost too numerous to be comprehended. It forms the plough of the farmer—the hook of the fisherman—the safe-guard of the mariner, and all those terrific engines of war used for assault and defence. Its use distinguishes a civilized people from those who are but a little elevated above the brute creation, except in their human form.

**COPPER ORE.**—On the mainland (Charlotte county) opposite the little Basaltic Island, the foldspathic rock is of a bright red colour, and its amorphous masses are occasionally stripped with narrow veins of green-stone, in which the horn-blende is more abundant. In this rock was discovered three veins of copper ore, two of them are each three inches, and one two inches wide, and extend from beneath the sea, up the side of a low cliff. The ore here occasionally contains pieces of pure native copper. Not unfrequently the native mineral is associated with its sulphate, green and blue carbonates, affording specimens of much interest. The ore is, however, principally the sulphurate,

and copper pyrites, which at one place is mixed in the rock to the distance of two feet on the side of the largest vein. The veins of ore are more readily decomposed than the hard rock wherein they are situated, therefore they are removed by the operations of the water and air, and deep fissures are left at the place they have occupied; the expense of exploring them, even superficially, is thus increased. The following is the result of an analysis of a specimen of the sulphurate :—

Copper, . . . . .	76. 5
Sulphur, . . . . .	19. 0
Iron, . . . . .	4. 0
	<hr/>
	99. 5

It is therefore a rich ore of copper—the veins increase in thickness as they descend, and there can be little doubt, that those already discovered are connected with a far greater deposit situated beneath the surface.

LEAD.—Galena or sulphurate of lead, occurs in the lime-stone near the mills of Mr Coates, *on the road leading from the Finger-Board, (which I have passed several times) to the head*



of Belleisle. It is scattered through the rock in small crystals, and narrow veins. This ore, by analysis, yields a small quantity of galena, and the silver contained in it, is too small to pay the expense of working either. This argentiferous galend is identical with the same ore discovered in the lias lime-stone of Nova-Scotia.

**MAGNESIA.**—About eighteen miles from the Grand Lake, and mouth of the stream, at a place called “Cast-Away Island,” a spring issues from the rocks, which will fill a hogshead in fifteen minutes; the water has a very unpleasant taste and odour, and was by the Indians believed, many years back, to be poison. By analysis, sixteen fluid ounces were found to contain—

Carbonic Acid.

Sulphurated Hydrogen.

Sulphate of Magnesia, 4 grains.

Sulphate of Soda, 17.5 ...

Oxide of Iron, 4 ...

The water is mildly aperient, from the sulphates of soda and magnesia contained in it. The iron gives it tonic properties.

LIME STONE.—*Carboniferous Lime Stone.*—About a mile south of the Oknabog Lake, and on the road leading along the west side of the river (in Queen's County) the out-cropping of the old mountain, or carboniferous lime-stone have been found. This formation, in a south-west direction, and on the opposite side of the river, makes a gentle curve from E.N.E. to N.E. It is not thick where the river intersects its strata, but widens considerably farther west. On the east side of the harbour of L'Tang, in the parish of St George, there is an inexhaustible supply of lime-stone belonging to the formation, extending toward St John. Its colours are black, blue, brown, and white, and wherever the strata are too much fractured, a good marble might be procured. The course of the strata is north-east and south-west; the dip is north-west at an angle of eighty; sometimes layers are perpendicular. This lime-stone is under and overlaid by clay and chlorite slates; it is penetrated by the numerous dikes and veins of greenstone, from a few feet to four inches in thickness. These dikes do not cut across the strata, but rise between them, having produced considerable alteration in the appearance and solidity of the rock;—*they have rendered the lime-stone crystalline,*

and sometimes filled it with cubic crystals of iron pyrites.

At Beaver-Harbour, Dipper-Harbour, and Musquash-Harbour, lime is to be found near the shore of the Cutter-Harbour, where it appears to be cavernous. On the side of the hill, there is a narrow opening that probably communicates with a cave, but the passage is narrow, and crossed by a small brook which descends among the rocks, and finally re-appears, breaking out at the breach some distance below. On the west side of the harbour it forms a ridge of considerable extent. This is not only an excellent situation for making lime, but a good marble quarry might be opened, and its productions shipped with little previous labour and expense. The marble is white, with blue veins; it bears a fine polish, and if opened to a proper depth, will afford blocks of a large size. Few places can afford a better situation for calcining lime, quarrying marble, and manufacturing alum and copperas; and it is hoped that some enterprising individual will soon bring those materials into use, and render them of public utility.

SULPHATE OF LIME OR GYPSUM.—Besides the foregoing minerals, the new red sandstone

system contains vast deposits of sulphate of lime or gypsum. The localities of this mineral are too numerous to require description ; they are common in the Hammond-River, at Sussex-Vale, and along a whole line of country between the midland road, leading to Kingstone, and the sources of the North River, a branch of the Petitcodiac, a distance of thirty miles. Sometimes here the rock is laminated, and beautiful crystals of selinite may in general be produced ; but this lamination is the result of crystalization, and not of stratification. The gypsum often rises above the red marly rocks, in rude naked columns, or broad white masses, without any covering of soil or vegetables upon them ; and it descends into the earth to an unknown depth. At Hammond-River, Sussex-Vale, and near the Mill Stream, the masses of gypsum have been found to contain on their sides, fragments of sandstone, conglomerate, and lime-stone, where they are in contact with these rocks. This is certain evidence that the sulphate of lime was collected subsequent to their formation.

ROCK SALT.—It is remarkable, that wherever the deposits of gypsum are found, there are *salt springs*, which evidently rise from deposits

of Rock Salt, situated in the rock of this formation. In making a few remarks on their situation, as compared with those of England, I would here observe, that it was formerly believed that all the principal deposits of Rock Salt were contained in the new sandstone series, which, on this account, has been called the saliferous system; but it appears from recent discoveries, that in Durham, Northumberland, and Leicestershire, in England, they proceed from the coal system. The salt rocks of the Alps are supported from oolite, and in the volcanic regions of Sicily and Auvergne, salt springs are numerous. Again, it was believed that rock salt had been derived from the evaporation of sea-water, and the situation of beds of salt, nearly on a level with the sea, was considered as a confirmation of this opinion. But many of the salt mines of Wurtemberg and Central Germany, are on plains of considerable elevation, and while some deposits are near the sea, others are far from it, and elevated more than 5000 feet above its waters.

In New-Brunswick, the beds of rock salt from which saline springs rises, are nearly on a level with the present ocean, and in situations where it is probable that the sea might have flowed at some remote period. It is, notwith-



standing, very difficult to frame any hypothesis in regard to the origin of deposits of rock salt in the earth, which will be free from objection; and it is necessary that farther discoveries should be made with respect both to their situation, and to the combinations which sodium is capable of forming, when placed under peculiar circumstances. In some of the West India Islands,—in England, and other parts of the world, the water of the ocean is admitted into large natural or artificial basins, and by the evaporating power of the sun's rays, the water escapes, and the salt is deposited; frequently, indeed, the process is carried on without the aid of art. Now, the briny springs of Cheshire, (England)—of Nova Scotia and New-Brunswick, are in such situations as will favour the opinion of the rock salt beneath having been produced by these simple means; nor is it impossible that in other countries, and in more elevated situations, the same mineral may have been the result of volcanic heat, applied to the sodium and chlorine of the salt.

GRANITE.—Like the several formations already noticed, the granite, entering into the primary chain, extends, in a north-east direction, to the very margin of the main river

where it rises in low naked cliffs, rather above the ordinary level of the country. At Fowler's and Jones' Mills, the river passes along directly at the termination of a long granitic ridge, that will average upwards of a mile and a-half in breadth. The granite forming this ridge, is of several varieties, and are equally free from any discomposable minerals that would injure their colour or durability. In general it is fine grained, compact, and will admit of the most delicate sculpture, without crumbling before the chisel. To these advantages, it may be added, that granite will seldom be seen in any country that can vie with it in beauty. Masses of almost any dimensions may be quarried within two hundred yards of the river, and the facilities for its transportation are such as are seldom possessed. Millstones have been made here for many years ; and one variety of rock is suitable for that purpose. Seldom, in any part of the world, are the several formations found succeeding each other in the great scale of supertions, with that beauty, regularity, and order, that they display on the section just adverted to. The granite is succeeded by the slate ; the slate by the old red sandstone ; then comes the carboniferous lime-stone, mill-stone grit, and the coal series, surmounted by con-

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glomerate, and the new red sandstone, appearing on the shores of the Grand Lake. The shores of the Grand Lake are strewn with boulders of granite, &c. The surface in all directions is low and level, and strongly contrasted with the abrupt hills and mountains of granite and trap-rocks farther south.

On the west side of the Long Reach, are syenite and slate. These rocks compose a considerable eminence, called the "Devil's Back," and other conical hills in the country adjacent. Bald Mountain is eleven hundred and twenty feet high, and will afford the traveller one of the most picturesque and delightful views in America.

Nothing can exceed the grandeur of this mountain scenery; the river, the great watery turnpike of the Province, appears like a serpentine brook, winding its way through the hills, and the steam-boats and small craft gliding over its surface in the summer season, render the prospect enchanting. Often they seem to be sailing among the grove of elms, and stacks of hay scattered over the intervalle—made still more pleasing by the half shadowed cottage, and spire of the village church.

On the Washademoak, on the south side of *a small cove*, the shore is strewn to the dis-

tance of half a-mile, with loose masses of hornstone, jasper, Egyptian jasper, calcedony, and quartz. The jasper is chiefly of a red colour, and passes into a thick calcedony, being arranged in spots and clouds, and shaded with smoky imitative figures. Associated with the jasper, is the variety called Egyptian jasper, which is distinguished from the other by peculiar zones, circles, and clouds of different colours; with these, a few small pieces of cornelian have been found, but in general this mineral is too much fractured to afford good specimens. These minerals evidently belong to some trap-dike in the neighbourhood.

The sandstone here form cliffs on the shore, or appear beneath its broken fragments. The minerals between Northern-Head and Dark-Harbour, (Grand Manaan Island) are amethyst, agate, jasper, hornstone, thomsonite, stilbite, heulandite, calcareous spar, zeolite, and apophyllite. These are similar to those found in Nova Scotia, and although they may not prove to be of much practical value, they are very interesting in the science of mineralogy, and the discovery will give a new feature to the Province, which is evidently not surpassed in mineral by any of her sister colonies.

Minerals are also to be found at Black-River.

Carlton, Musquash, Lancaster, Beaver-Harbour, Point Le Proc, and at Hog or Jasper Island, which is at the mouth of the Digdeguash. A great part of the island is composed of stripped jasper, not unfit for the purposes of the lapidary. Large veins and dikes of this mineral have often been observed, and are too common to require particular description.

OBSERVATIONS ON THE SLATES AND GREYWICKE  
ON THE COAST OF NEW-BRUNSWICK.

Taking a general view of the greywicke and slate rocks, as they extend from the Scoodiac on the American boundary, in a north-easterly direction, along the coast of the Bay of Fundy, to the county of Westmoreland, they appear to be situated along the side of a vast basin or trough, which is occupied by the waters of the Bay ; and, perhaps, it would not be speculating too far to assume, that the opposite side of this basin or trough, appears in Nova Scotia, where the schistose rocks are seen sloping from a granite ridge, and dipping towards the centre of the basin.

*The great eruptions of trap, and other volcanic rocks, which have been forced through*

portions of these formations, have not altered their general direction and inclination so far, that their bounds and former conditions cannot be understood. This class of strata, to which the term greywicke has been generally applied, admits of a division; as one part of the class is very different from the other in position, composition, and organic remains, and as each division corresponds in its principal characters with the cabrian and solurian systems of Professor Sedwick and Mr Murchison, as they exist in Europe. These terms have been adopted as equally applicable to an extensive class of rocks in New-Brunswick.

In an economical point of view, the value of these rocks is considerable; at many places they will supply excellent materials for buildings, paving of streets, and for ornamental purposes. At Campo-Bello, they contain lead, and at Digdeguash, copper and iron is abundant in them; the latter metal, in different combinations with sulphur and oxygen, is capable of yielding a number of the metallic salts, employed as articles of commerce, and in manufactories.

The limestone is imported for manure, and will afford excellent marble; and it is *satisfactory to know*, that, since the geological survey

of the Province was commenced, attention has been directed to several of these natural productions, while the soil is also improving under the application of substances, which had before remained unnoticed.

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**NOTE.—*Mineral Wealth of Great Britain.***—The average value of the annual produce of the mines of the British Islands, amounts to the sum of £20,000,000, of which about £8,000,000 arise from iron, and £2,000,000 from coal. The mineral produce of Cornwall and Devon alone, has recently amounted to £1,340,000. In this estimate, the value of copper is taken in the ore before fusion ; that of the iron, lead, zinc, tin, and silver after fusion, in their first marketable condition.

## CHAPTER VI.

Account of the Rivers, Islands, Bay of Fundy, &c.—Falls at St John's, Lakes, Streams, &c.—American Indians—Alluvium along the Banks of the St John—Action of the Sea on the Coast of New-Brunswick.

IN a preceding chapter I have noticed that the Province of New-Brunswick extends from its south-west point, on the island of Grand Manaan at the entrance of the Bay of Fundy, in lat. 44. 40., long. 67. 10., to the 48th degree of north latitude, &c. The Bay of Fundy runs between New-Brunswick and Nova Scotia, and is indented with numerous headlands and promontories, some of which stand out to a considerable distance into the sea or bay.

Numerous islands, also, are scattered along the mouth of this Bay, at short distances, forming a sort of chain nearly quite across it. These are almost incessantly enveloped in dense fogs, during the spring and summer months; but occasionally, when these become scattered by



the intense rays of a summer's sun, and the winds have ceased to agitate the waters, the broad glassy surface of this vast sheet, of a hundred miles in length, and sixty or eighty in breadth, lying in quietness, is seen thickly scattered over with sea fowl,—some on the wing, soaring aloft, and traversing the Bay in various directions ; others in the water, either swimming or screaming, or floating on the chips and fragments of wood and bark that have drifted out to sea, from the various rivers and small inlets of the lumber districts bordering upon the shores.

To observe a gull or duck navigating one of these puny vessels, standing erect on his frail bark, as if watching his own reflected image in the glassy surface beneath, while thousands of his fellows are busily engaged around him in gathering the floating sea-weed and offal that are drifting with the tide, is truly laughable.

On a still day, when the tide is retreating from the Bay, and the sun is resting on the surface of the water, numerous shoals of porpoises and grampuses are seen spouting, and blowing, and sporting, now rising to the surface in quick succession, and now retreating into the depths below ; while at intervals, at a distance, the huge whale is heard to pour forth

his smoking breath like the discharge of a steamer, raising in broken spray and foam the calm smoothness or gentle ripple of the ocean, and sometimes lying half exposed to view floating—a huge, black, unshapely mass—on the surface.

The small boats, pink sterns, and larger crafts, are seen at anchor, while the fishermen, are busily plying the lines, and raising at every moment some finny inhabitant from the watery element below.

Coasters and Merchantmen are seen crossing the Bay in different directions, and at divers distances; some departing for the West Indies and Europe, with high piled decks of lumber, and some returning from their voyages, laden with foreign commodities for the use of the inhabitants of the Provinces.

From the middle of the Bay, may be seen at one *coup d'œil*, the islands of Campo-Bello, Grand Manaan, Tit Manaan, Long Island, Brier Island, and the shores of Nova Scotia, with its various capes and headlands, stretching out into that part of the Bay, called St Mary's; and low down in the horizon, as far as the eye can extend its vision, Mount Desert, with its barren and naked rocks, &c.

I shall now observe, that the principal rivers

to the northward is the Restigouche, which empties into the Bay Chaleur, and running south-west about fifty miles, terminates near the sources of the Riviere Verte, which empties into the St John, near the junction with the Madawaska river, and where it suddenly turns off in a southerly direction. Another branch of the Restigouche heads near Grand River, which unites with the St John, at a short distance lower down.

The next river of importance in that quarter, is the Miramichi, which empties into the Gulf of St Lawrence, in lat. 47, long. 65, and running in a south-west direction, about thirty miles, sends off a branch called the North-West, and continues its course in its original direction to Boiestown, forty miles from Fredericton, where it suddenly turns to the westward, and branches off into the Pexas and Little South-West Rivers, one of which heads near the Tobique, and the other near the Shikatahawk rivers, which discharge themselves into the St John, nearly 200 miles from its mouth in the Bay of Fundy. There are the Renous and St Bartholomew's, and a number of other tributary streams and rivers which fall into the *main* branch of the Miramichi, between the *Miramichi* river and the Restigouche, at the

bottom of a deep indent in the Bay. The Bay Chaleur, is Nipisiguit harbour, at present called Bathurst. The Great and Middle Nipisiguit form a junction, the village of Bathurst being situated on the Peninsula thus caused, within twenty miles of Bathurst. The country is watered by the Caraquet, Pokamouche, Tracadie, Tabusintac, Bartibog, and other minor rivers. The Richibucto, another river on the eastern coast, empties into the Straits of Northumberland, about thirty miles to the southward of the Miramichi, and runs in a south-west direction, until it separates into two branches, one of which heads near the Salmon River or Grand Lake, and the other near the head of the New Canaan River, which falls into the Washademoac. There are other minor rivers in that quarter, but which it is unnecessary to refer to at present.

After crossing the isthmus already alluded to, and at a short distance from the head of the Bay of Fundy, the Petitcodiac River empties itself into the Shepody Bay, having first united with those of the Memremcook. This river, or rather arm of the Bay, for a distance of twenty miles, extends in a north-west direction, when it makes a sudden turn to the southward and westward, and afterwards separates into

two branches, one of which heads near Salmon River, a branch of the Kennebecasis, and the other making a short detour to the northward, terminates near the head of the Cocagne River, which empties upon the eastern coast of the Province. The tide of the Bay of Fundy, which at some places near its head, rises upwards of sixty feet, rushes into the Petitcodiac and Memremcook with great velocity, forming a boar which enters the former river at a considerable elevation.

The Memremcook river intersects the Petitcodiac near its junction with the Bay of Fundy.

From the Petitcodiac to the mouth of the St. John, there is no river or harbour of any consequence, with the exception of that of Quaco (St. Martin's) a few miles to the eastward of that place, where a light-house has been erected to warn the mariner against approaching its treacherous and fatal ledges.

A short distance to the westward of the harbour of St. John is Madawagonis Bay, which formed originally one of the outlets of the St. John, before the rocks and falls were rent asunder, and the waters of that river were enabled to discharge themselves through the ravine, which some convulsion of nature has evi-



dently occasioned. Farther to the westward is Musquash harbour, which is a mile and a half wide and two miles long, into which a minor river of the same name empties itself. At the head of the Bay, the Digdeguash empties itself, and a few miles below it is the mouth of the Magaguadavic.

The Falls near this river, and which run through the village of St George, have been fully explained in a former Chapter. At the head of the Digdeguash, to the westward, an arm of the Bay extends in a north-west direction, till it meets the Scoodac River, decided by Great Britain in 1798, to be the St Croix, intended by the treaty of 1783, when the independence of the United States was acknowledged by Great Britain. This river runs in a north-westerly direction, till it terminates in a series of Lakes, the most remote of which is only a short distance from the Highlands designated in that treaty, and near one of the branches of the Penobscot.

From the head of Oak Bay, situated near the junction of the Scoodac, with Passamaquoddy Bay, a new road has been made to Fredericton, and another is opened to the mouth of Eel River, and thence to Woodstock.

The Falls near St John are a great natural

curiosity, from the circumstance of the water descending in opposite directions at ebb and flood-tide, and being level at about half-tide. This anomaly is caused by the waters of the Bay of Fundy, which enter the harbour of St John, rise at high-water above the level of the river, and consequently descend through the Falls, and pass inwards, until checked by the accumulating waters of the river, and the retreat of those of the Bay when a similar discharge of water takes place outwards, and the descent is thus in that direction. During still water, at about half-tide, either upon ebb or flow, steam-boats, or river craft, piloted by persons who are acquainted with the place, pass up or down in comparative security.

Although this passage is the only outlet at present for the St John, it is evident that it has been formed by some convulsion of nature, similar to that, or probably the same which rent asunder the channel of the Magaguadavic, and forced open the passage of the Digby-Gut, directly opposite the harbour of St John, on the Nova Scotia side of the Bay of Fundy, and thus drained off the body of water that evidently covered the Aylesford Plains and Carriboo Bog, over which the post road at present *passes Annapolis and Halifax.*



After passing the abrupt opening near Indian Town, two miles from the city of St John, the river suddenly widens above, and forms what is termed Grand Bay, that extends about twenty miles in a north-west direction, receives the waters of the Kennebeckasis and Hammond Rivers, the latter of which empties from the eastward, and the former, passing through Norton and Sussex Vale, terminates in Salmon River, which rises in the vicinity of the head waters of the Petitcodiac, or rather the Annagance River, which empties into it. A small stream called Trout-River, flows into the Kennebeckasis at its junction with Salmon River, about twenty miles from Hampton-Ferry; and at the entrance of Sussex Vale, is what is called Smith-Creek, which runs to the northward, and may be said to be one of the branches at the head of the Kennebeckasis, Salmon River forming the other. Just above Grand Bay, on the left, as you ascend, and ten miles from Indian-Town, it was termed the Nerepis River or Creek, which extends upwards of twelve miles over a fine bed of intervale land. It then passes through a deep gorge in the Nerepis mountain, wending its way at times round the base of almost perpendicular cliffs which rise on each side of the valley for a considerable distance.

From the Nerepis Creek for fifteen miles, the St John, which is here called the Long-Reach, runs in a north-east direction entering Belle Isle Bay, twenty-seven miles from Indian-Town, and is upon an average a mile wide, resembling a lake rather than a Bay, or branch of a river.

At the mouth of Belle Isle Bay, the St John suddenly resumes its course to the northward and westward, for the distance of ten miles, when you reach the mouth of the Washademoac. There is a fine stream on the west side of the St John, called Little River. Five miles above Little River, is the Ocnabog Lake, into which flows a stream of the same name, that extends fifteen miles, crossing the road leading from Gagetown to the Nerepis. Its course is thence nearly west, through a natural meadow, where there are indications of coal, until it approaches Tante Wante, where it terminates.

Just opposite the Ocnabog, on the east side of the St John, and eleven miles from the mouth of Belle Isle Bay, is the Washademoac Lake, the tide extending upwards of twenty miles into the Lake, where it meets the New Canaan River, and whose head-waters are at *no great* distance from the Petitcodiac River. *The mouth of the Washademoac Lake, is forty*

miles from St John, and three below Gagetown.

Near Salmon Creek, there is a stream that empties into the Lake, and about five miles from its head, the Long Creek empties into it. The New Canaan River falls rapidly down to the Washademoac Lake, through which it continues its course, making the distance from its source to its junction with the St John, about seventy miles.

Five miles above the mouth of the Washademoac, and on the same side of the river, is the entrance to the Jemseg, a sort of natural canal, three miles in extent, which connects the St. John with Grand Lake. This is an extensive body of water, and at its head are the Newcastle Coal Creek, and Salmon-River, whose tributary streams are the Gasperan, and the Big and Little Forks.

There are two extensive Bays near the head of the Lake on the eastern side, called Cumberland Bay and Young's Cove. Grand Lake runs in a north-east direction, is twenty miles in length, and at its broadest part, about three wide, except opposite Cumberland Bay, to the head of which, the distance is seven miles. From shore to shore, the greatest depth does not exceed twelve fathoms. The main branch

of the Newcastle Heads, is somewhere near the Nashwaak, a river that discharges its waters into the St John, opposite Fredericton.

The lower part of the Grand Lake is connected with the Maquapit and French Lakes, by means of a water communication, called "The Thoroughfare." Eight miles above the Ocnabog is Gagetown Creek, which runs up five miles, where it divides and enters Hartt's and Cog's Lakes. From Gagetown Creek, to the mouth of the Oromocto, the land is elevated, and well settled. From the mouth of the Jemseg, the St John proceeds in a westerly course, till it reaches a bay situated three miles below Fredericton. Near Sheffield is situated the French and Maquapit Lakes. These Lakes both extend in the same direction as the St John River; as is also the case with the Portobello, a stream which empties into French Lake from the westward, rising back of Margerville, and passing in the rear of the swampy land in the upper part of Sheffield. French Lake extends in a northerly direction till it meets Little River. The Maquapit Lake lies between French and Grand Lakes, at a distance of two miles from the main river, showing, on its southern side, an island of two miles long, and from eighty to a hundred yards wide.

The Maquapit Lake is a beautiful sheet of water, lying in a north-east and south-western direction. It is about five miles in length when the water is low in the summer. In breadth it is three miles; in the spring of the year it overflows its boundary, and extends to the west, connecting itself with the French Lake, one mile distance. It flows also south, inundating the low and extensive marshes, associating and mixing its waters with those of Grand Lake.

In the months of May and June, the inhabitants often employ themselves in taking fish, called gaspereaux, that abound in this part during the season, with shad and bass, which greatly encourage the settling of the place.

It receives on the south side, the waters of the French Lake, through the Thoroughfare, or connecting channel, which winds and flows darkly and sullenly through three miles of low intervale, thickly studded with large birch, maple, and elm trees, whose luxuriant and spreading branches cast a gloom of pleasing solitude over the unruffled bosom of the noiseless stream. The shores of this beautiful lake have abounded with white oak, whose quality can neither be excelled nor equalled by any in the western world.

But this invaluable wood has been profusely

cut down for the most trifling purposes, so that it is now nearly all destroyed. The land at the north-west side of the lake is not of superior quality. On the east, the soil is light, and produces sparingly growing soft wood, white-birch and poplar.

But to return to the river. The shore of the river is planted with low trees and bushes to prevent it from being washed away by the floods of spring, when the waters of the St John rise to the height of fifteen feet. The bank of the river at Maugerville is probably twenty feet above the level of the river, when at its ordinary height during summer. A log was found in summer 1840, at this place, at the depth above-mentioned from the surface of the bank; and it may be presumed was left there by the retiring waters after a periodical fall, the subsequent deposits having buried it; but with which the last yearly (1841) accumulations of soil can bear no comparison.

Twelve miles below Fredericton, and fourteen above Swan Creek, the Oromocto flows into the St John. The Oromocto is the only river of any size, with the exception of the Kennebeckasis, that falls directly into the St John below Fredericton. It has its rise in two lakes, at the distance of twenty miles apart,



called North and South Branch Lakes; the streams from which form a junction twenty miles from the village, at the mouth of the Oromocto. There are several minor streams, some of which fall into these branches, and others into the main stream. On the south branch are Shin and Back Creeks; on the north are Hardwood and Lyon streams; and on the main Oromocto, are the Brookwell stream, the Rusa-gonis and Rinny Creek. About seven miles from the mouth of the Oromocto on Brockwell Stream, the land is good, also on the Rusa-gonis it is the same. The Oromocto is navigable for sloops and wood boats, a distance of twenty miles; for canoes upwards of thirty; and, except during summer, the Creeks already mentioned may be navigated by canoes. Salmon, shad, bass, and gaspereaux are found in the Oromocto, when in season, and all the small streams abound with the finest description of trout. About seven miles from the mouth of the Oromocto, on the south-west branch, is a fine sheet of water, called French Lake, about a mile long, and the same broad. Its waters abound with a trout of a superior flavour and a large size. Just below Fredericton, the river turns suddenly to the northward, and after passing the Seat of Government in a westerly, re-

sumes a south-western direction, thus forming a segment of a circle, within which, on the right bank of the river, the town is situated. At Kingsclear, six miles farther up, it abruptly changes to the north-west, and pursues that course for about sixteen miles through Queensbury and Prince William, to the Nackawick, when another sudden turn takes place for a short distance, and it again resumes a north-west course, till it reaches Woodstock. As the town projects into the river, its opposite shores are seen at the termination of the front street, and in summer time, when the trees are clothed with their luxuriant foliage, and the graceful elm waves in the breeze, the scenery around Fredericton is not to be exceeded in beauty by any place in the Province.

Opposite Fredericton are two rivers; that at the lower part of the town is called Nashwaak, flowing from the northward and westward, and ultimately heads beyond Woodstock, about seventy miles above Fredericton; and the other the Nashwasis, emptying from the northward, and much inferior in extent and importance. Between the mouth of the Nashwaak, and that of the Nashwasis or Little Nashwaak, (the *termination asis*, in the Indian dialect, meaning *little*,) is about two miles, along which a road

passes parallel with the margin of the river, in front of which, during summer, a number of Indian families generally encamp.

#### REMARKS ON THE INDIANS.

The male is called an Indian, the female a Squaw, and a child a Papooss. They are of a copper colour, and invariably have long, black, sleek hair. The Indians wear pantaloons of coarse cloth, and a frock-coat made either of coarse cloth or a blanket. The skirt reaches the knee, and is close all round, except in the front. A common sash is worn round the waist, and the coat fastens close to the chin when required, but it is generally worn open in summer, without either shirt or neckcloth. A pair of coarse moccassins of their own manufacture, with a black hat of the English fashion, completes the dress.

A Squaw wears moccassins, and a hat the same as the Indian, with coarse cloth leggings, and a short petticoat, either of coarse blue cloth, or of a blanket. A loose jacket is worn either of cloth or calico, and in cold weather, both sexes wear a blanket over the dress.

A young Papooss is carried in a small box

like a violin case, made very light, without a lid, and the Papooss is fixed tightly with a cord from head to foot, and when on a journey, the Squaw carries the Papooss case on her back.



The principal sort of them dress somewhat different. An Indian chief's dress is worthy of notice ; it consists of moccassins, richly trimmed with seed beads, or porcupine's quills, and cloth leggings trimmed with spangles or porcupine's quills. The coat is similar to a surtout, the skirt reaching a little below the knee, and close round, except before. It is richly decorated round the verge of the skirt, and up the front, with gold or silver lace ; a rich and beautiful Indian sash is worn round the waist, and the whole is surmounted by a fine hat, with a broad band of gold or silver lace, with a plume of ostrich feathers to ornament the front, which completes the dress.

A Squaw of the same cast wears moccassins and leggings similar to those worn by an Indian ; a jacket of fine cloth or merino, either of crimson, bloom, or blue ; the skirt is a piece of cloth put near twice round the body, and lapped over at one side ; it reaches a little below the knee, and covers the top of the leggings. Some have a skirt at the jacket of the same material, extending about half a yard from the lower extremity. This upper garment resembles a Spanish pelisse, and is frequently trimmed round the verge, and up the front. The neck and breast are left rather bare, ornamented

with a gold chain, or a handsome necklace of oriental pearl. The hair is worn plain, shed in the front, and collapsed behind; gold pendants adorn the ears, while the hands and wrists are decorated with rings and bracelets. A round hat, the same as the Indians, with broad band and plume complete the dress. The aboriginal roamers of the forest have, in general, no inclination for arts or agriculture, and the sciences are little known amongst them. The Squaws make the curiosities which they sell, and do the greater part of the work. The Indians are rather indolent, and occupy their time in hunting and fishing.

These unfortunate people have greatly degenerated, and are fast becoming extinct. This is not from any ill usage, or want of kindness and consideration on the part of their more civilized brethren. They are every where in these Provinces, on the most friendly terms with the white inhabitants, who always accost them with the term "brother" or "sister," and perform towards them many acts of unobtrusive charity. They are a harmless people; (I have had conversation with several, and I believe them to be such,) and are much attached to the British government, and the inhabitants of these Provinces. Any person may confident-



ly trust him or herself to the care and attendance of his or her Indian guide, penetrate with him into the most remote and almost impenetrable forest, and rest secure on his integrity and knowledge of the country which he may be traversing. Various attempts have been made to induce these people to adopt the modes and habits of cultivated humanity, but content with the freedom they have long enjoyed, they roam through the country at pleasure, sitting down near some favourite hunting ground, or fishing stream, on the margin of a lake, or in some dense forest, sheltered from the wintry blast, there they satisfy the wants of nature, which are few, and remove when tired of the monotony of the place, or the appearance of warmer weather, or the approaching scarcity of food. Thus living a life of seclusion and independence, they care not for events that are happening around.

“ Enough for them, in ignorance bred,  
Night yields to morn, and sun to rain,  
That Nature's pulse, in winter dead,  
By spring rekindled throbs again.”

The Indians are deeper sunk in misery and superstition than they are generally supposed to be. They are, in fact, an ignorant, selfish,

and degraded class of people ; true, they eat, drink, sleep, and think as other human beings, but their ideas of the future state of existence beyond the grave, are as erroneous, and present no more cheering prospect than does the miserable subterfuge on which the untaught Hindoo rests his hope for another world.

Nor are they less tenacious in the observance of rites and ceremonies, than the poor Hindoo is of retaining caste. Their ideas of Deity are grovelling in the extreme, being associated with creatures most repugnant to our feelings ; which, together with their manner of conducting religious worship, renders them no less idolaters than those who bow down to gods of wood and stone—the work of their own hands. Deity exists in the form of a great snake, who is the former of their persons, the sustainer of their bodies, and the giver of all good things. Evil spirits also exist in the form of snakes, who dispense judgments, send bad fruits, bad success in hunts, bad animals, and plants. They hold converse with the dead, furnish food for their hungry spirits, and perform numerous unmeaning ceremonies over their graves. Honesty in dealing with each *other*, and their white neighbours, they are *generally* regardless of.

The Nashwasis is a small stream extending in a northerly direction. It enters the St John, opposite the government house at Fredericton. Passing from the mouth of the Nashwaak, to that of the Nashwasis, it pursues its course a short distance from the St John, to the parish of Douglas. About nine miles from Fredericton, the Keswick Creek empties into the St John. This has evidently been at some time a wide and extensive river, the opposite shore of which is plainly discernible from the Ridge, an elevated track of country, situated upwards of two miles in the rear of Keswick-Bluff, opposite the French village on the St John, to which allusion has been made in a former chapter.

Twenty-four miles from Fredericton, the Pokicok River rises near the Magaguadavic Lake, which is a portage, and runs nearly parallel with the St John, at a distance of five miles in a north-west direction, and falls into the main river, thirty-six miles from Fredericton. There is a handsome Fall of water near the mouth. Above these Falls, the stream is navigable for canoes, and it abounds with eels, chub, and trout.

Lake George is one of the sources of this river. The Shugomock discharges its waters

into the St John, from the westward, five miles above the Pokicok, and is from a hundred to a hundred and fifty feet wide. This river has its origin near the Chiputneticook, a branch of the Scoodiac River, at the Palfrey Mountains, which separate these rivers. Eel river, which is near the Shugomock, is larger than those just mentioned. It heads near the Chiputneticook, at no great distance from the Monument, whence the present, but temporary boundary-line runs due north to Marshall.

At Woodstock, the shire town of the county of Carlton, the Meduxnikik empties into the St John, twelve miles above Eel River, and discharges itself through the village of Woodstock. This stream runs in a north-westerly direction for fifteen miles, when it separates into two branches, which pass into the American territory. Salmon and trout are plentiful.

On the east side of the St John, about ten miles above the Woodstock Court-house, the Pekagomik enters that river, and runs five miles in a north-east direction, where the coal stream empties. It then turns to the east-south-east about ten miles to the Forks, and there divides into the north and south branches, *which flow fifteen miles.*

*The Coal Stream empties into the Pekago-*

mik, from the north-east, and extends upwards till it crosses the road from the Little Shiktahawk, to the Little South-West Branch of the Great South-West Miramichi. The Pekago-mik empties opposite Wakefield.

The next large stream flowing into the St John, from the eastward, is the Shiktahawk, which intersects it four miles above the Big Presq Isle, on the opposite side, and twenty miles from Woodstock. This river rises in a ridge of high lands that separates the waters of the Little South-West Miramichi, from those which fall into the St John, and runs in about a south-west direction, till it strikes the main river. The extent of this river is about twenty miles, and near its head waters, is one of the Lakes in which the Nashwaak has its rise. Three miles above, is the Munquat, which resembles the Shiktahawk, and flows in the same direction nearly. There are other minor streams in the vicinity, which it is unnecessary to notice, with the exception of the River de Chute, which rises near Marshall, and after running about twenty miles, empties into the St John, at the same distance below the Tobique, and thirty-six above Woodstock. At the mouth of the River de Chute, there are Falls of about eight feet perpendicular height.

that prevent boats from ascending. Forty-eight miles above Woodstock, the River Tobique empties into the St John from the eastward, and extends in a north-east direction, about a hundred miles, seventy of which it is navigable; its average width is twenty roods. The Tobique abounds with salmon and trout.

Fifteen miles above the Tobique, on the opposite side of the St John, is Salmon River, which runs thirty five miles in a north-east direction, and terminates in two branches that extend in opposite directions. Boats may navigate this river twenty miles, and canoes thirty, up stream. Formerly large quantities of salmon were taken here; at present, however, they are scarce, but trout, and a most excellent fish, called white fish, are taken in abundance.

Retracing our steps, on the right bank of the St John, the Restook River falls into it, four miles above the Tobique, from the westward.

The whole length of the Restook, is one hundred and fifty miles by its course, which is very serpentine, but preserves a general southward direction. Its waters are shoal, having a smooth bottom, and a moderate current; salmon and trout are the principal fish that it contains.

*This river has its rise in the same mountainous region, with the other sources of the Allegash,*



belonging to St John on the north, and the eastern branch of the Penobscot on the south.

Twenty miles from the mouth of the river, it receives the Little Madawaska, from the northward. This stream is thirty miles in length. The next stream of any importance is the Presqueisle, entering from the south. This isle is forty-one miles from the mouth of the Aroostook, by the river course, and has its course twenty miles to the southward of its own discharge. Forty-one miles the mouth of the Aroostook Salmon River enters from the north. This is a considerable stream, and waters a large track of country.

From the mouth of the Aroostook, the St John extends northwardly, upwards of eighteen miles to the Grand Falls. Here the channel of the river is broken by a chain of rocks which run across the river, and produce a tremendous Fall, more than forty feet perpendicular, down which the water of the river rushes with resistless impetuosity. The river, just above the cataract, makes a short bend, or nearly a right angle, forming a small bay, a few roods above the precipice, in which there is an eddy, which makes it a safe landing place, although very near the main Fall, where canoes, &c. pass with the greatest safety. Immediately below this

bay, the river suddenly contracts—a point of rocks project from the western shore, and narrows the channel to the width of a few roods. The waters thus pent up, sweep over the rugged bottom with great velocity. Just before they reach the main precipice, they rush down a descent of some feet, and rebound in foam from a bed of rocks on the verge of the Fall; they are then precipitated down the perpendicular cliffs, into the abyss below, which is studded with rocks that nearly choke the passage, leaving only a small opening in the centre, through which the water, after whirling for some time in the basin, rushes with tremendous impetuosity, sweeping through a broken, rocky channel, and a succession of Falls for upwards of a mile, being closely shut in by rocks, which, in some places, overhang the river so as to hide most part of it from the view of the observer. Trees and timber, which are carried down the Falls, are sometimes whirled round in the basin below the precipice till they are ground to pieces; sometimes their ends are tapered to a point, and at other times broken and crushed to pieces.

A short distance from the Falls a succession commences—the first from a continued foam, *called the White Rapids*. The banks of the *river are here very high*; and the water, com-

pressed by a narrow channel, rushes through the bed of rocks which nearly crosses the river, and whirling about in their passage, are forced over, and round the crags, in sheets of foam. Thirteen miles above these Falls, Grand River empties from the northward and eastward. This river rises in a range of mountains, that divides the Restigouche from the waters falling into the St John. It is upwards of thirty miles in extent. Canoes and light boats may proceed twenty miles from the Grand River. At a short distance from Grand River is the Shiegash. Twenty-five miles from the Grand Falls, Green River, so named from the peculiar hue of its waters, intersects the St John, also coming from the northward.

About four miles above the Grand Falls, the Madawaaska settlement commences, and extends along both sides of the St John, as far as the River St Francis—a distance of forty miles. Thirty-five miles from the Grand Falls, the Madawaaska River intersects the St John, this river has its source in Lake Temisounta, which is twenty-five miles distant. From six to seven miles from its confluence with the St John, Trout River flows into the Madawaaska, at the point where the Madawaaska meets the St John, which, from the Grand Falls, has

pursued a north-west course, the latter river turns to the southward and westward, and proceeds in that direction for twelve miles to the Merumpticook, entering from the northward. Five miles farther up in the direction to Fish River, entering from the southward, the St John takes a westerly direction for thirteen miles to the St Francis, emptying from the northward, and then eight miles southerly and westerly to the Allegash, a principal branch of the St John, flowing from the southward. This river has its source twelve miles north of Mount Ktaadn, and in by far the most mountainous and elevated region south of the St Lawrence. For about one-third of its extent from its source, it connects a chain of extensive lakes, nearly on one continuous level, being united by streams of small extent, and very little fall. The level of the uppermost of these lakes has been found to be only a very few feet higher than the waters of the Penobscot, rising in its immediate vicinity, which has suggested to our speculative neighbours the idea of a canal, probably not exceeding half a mile in length, which would enable them to transport timber and agricultural produce, as the country improved, to the Bangor market; but which nature designed for that of St John. This stream

does not water a track of country of much width, but of considerable length, a great part of it being well-timbered, and towards the mouth of the Allegash, there are many good localities for settlement.

Pursuing the same southerly and westerly direction fifteen miles farther, Black River falls into the St John from the northward. From this stream, its course is still the same for forty miles to the mouth of the Daagwam or Metawamkeag, thence six miles inclining south-west, to the Wootenaamaatic, or Woolastookwamasis, the south-westerly source of the St John ; and, finally, twenty miles south, inclining east to its extreme source, in lat. 46. nearly parallel of the mouth of Eel River, which has been noticed, as emptying into the St John, fifty miles above Fredericton ; and in long. 69-50, three hundred and sixty from its point of discharge into the Bay of Fundy, and a hundred and twenty-eight from the Grand Falls, near which the pretended line of the State of Maine is extended, and whose unjust and preposterous claim has been caused by the unwarranted concessions of a British commission to American finesse, in agreeing to substitute the source of a tributary river for that of the St Croix, as a starting point, and which has been permitted

to assume its present imposing shape, by the indifference with which the British Cabinet for several years viewed the question, and the ignorance that prevails among many in this country, with reference to the importance and extent of this fair portion of Her Majesty's dominions.

#### ALLUVIUM ALONG THE BANKS OF THE ST JOHN.

It may not be improper here to take a brief view of the extensive collections of alluvium which have been formed, and are still accumulating along the banks of the St John. This majestic stream having taken its rise upwards of four hundred miles in the interior of the country, receives vast supplies of water from the numerous branches, tributaries, and lakes communicating with it, until it is poured into the sea, through a narrow out-let near the city. It not only conveys to the ocean the surplus waters of a large part of New-Brunswick, but also drains a part of the State of Maine, belonging to the United States. Of all the agents employed in modifying the surface of *the earth*, water is the most active. Its *operations* commences in the falling of a gentle



shower, and does not cease until after the mighty torrent has lost its fury in the sea. The particles of the hardest rocks become loosened by atmospheric changes, and are swept downwards from the mountain's brow, to form new deposits in the valleys ; by currents of water, even large rocks are torn from their native beds, and transported to great distances ; the soil thus formed is always deposited along the lowest levels ; and the matter there collected, whether consisting of large stones, gravel, sand, or mud, is identical with the rocks from which it was derived, unless changed by some chemical affinity existing between its atoms. From the debris of the surrounding country, all the low intervalle has been produced. Each succeeding freshet brings down a new supply of mud and sediment, which is added to former accumulations, and yearly increases their fertility.

The alluvial deposits along the St John, contain the relics of animals and plants, still belonging to the country, and suffering transportation through the medium of water. Along the deep water-courses and channels worn out by the freshets abraded—banks, and newly opened ditches, rafts of timber boards, shingles, leaves, bones of birds and quadrupeds, and

fluviatile shells, have been found buried in the alluvium where they are deposited, in the same manner that the remains of organized bodies appear in the solid rocks. The sediment accumulates on the borders of the river more readily than near the upland; this arises from the particles of alluvium being thrown down before they reach the more remote places,—hence all the coarse materials, by falling first, will be found upon the banks of the river, and the fine particles only are conveyed, in time of freshet, to the lowest and the most remote parts; thus the river between two alluvial walls, throw up the greatest deposit along its margin. The Mississippi, and other large streams, exhibit the same phenomena.

From the annual freshets that overflow all the low lands along the St John, those lands are rising, and consequently improving in quality, by being rendered capable of producing the finer grasses; and the time is drawing nigh, when all the sunken tracks along the noble stream, will become so elevated by yearly accessions of diluvial matter, that they will only be covered by water during extreme floods, and can be extensively cultivated.

*From the slow movement of the current, this river may be considered a lake during the*

summer season, but in the spring and autumn, the violence of the flood sweeps down immense quantities of sand, gravel, and mud ; but as the river may be said to be damed up at its mouth, the sedimentary matter cannot escape, and by the back current of the tide, it is deposited along the banks and low places, which are yearly receiving new deposits. In the meantime, the channel is kept freely open, and the sediment brought down is not permitted to lessen its depth—the water always securing for itself a free passage.

When we look back and consider what was the condition of this river-valley previous to the collection of alluviums along its borders, we see the site of an ancient estuary of the sea meeting a lake. The elevation of the coast has been already adverted to, and the evidences of that event have been noticed. From all these, it appears evident, that the physical character of the country has been greatly changed at a period comparatively recent in geological chronology. The precise nature of the revolutions, by which the physical geography of this part of the Province has been altered, may never be perfectly understood, but that they have all improved its most important character, and especially *its agricultural condition*, is evident, and

the wisdom and goodness of Supreme Intelligence are every where manifest.

ACTION OF THE SEA ON THE COAST OF  
NEW-BRUNSWICK.

About ninety miles of coast, besides estuaries and indentations, are, in the district under consideration, exposed to the action of the sea; and an opportunity is thereby afforded for observing the action of the tides and waves upon the rocks of the shore.

From Cape Misperck to Cape Enrage, the ordinary rapidity of the tide is from three to four miles an hour.

At Shepody Bay and Cumberland Basin, its velocity is much increased; and in the mouths of the Petitecodiac, Memremcook, and Tantamarre it runs at the rate of ten miles an hour. But notwithstanding this constant current along the line of coast, its effects in abrading the rocks, are limited to those of a soft and yielding nature, and the range of strong eddies where the water is urged upon the naked strata with violence. The configuration of any coast depends upon the hardness of the rocks exposed to the sea, which wears out the most yielding

parts into harbours, bays, and coves, while the more compact masses are left, forming capes and headlands.

At every situation in the above distance, these observations will apply, due allowance being made for the variable power of the waves, and the entrance of rivers. It might be supposed that low, sandy shores would suffer most from the action of the sea, but such is not the fact; in those instances, the waves throw up a barrier of sand and shingle, upon which their force is broken, and the dry land is thus defended from encroachment.

Along the shore under consideration, the Bay is bordered in general by steep cliffs; these, by being undermined by the waves, fall down, and the rubbish forms a slope, defending the precipice, until it is washed away, when the same process is repeated. The falling of the cliffs is far from common in the spring, when the rocks which have been rent asunder by the expansion of the water freezing in winter, are loosened when the ice dissolves, and they, therefore, fall headlong in enormous masses to the beach below.

It is to the formidable action of the breakers, however, that the great dilapidation of the *shore* may be chiefly ascribed. Even in calm

weather, the ground-swell, as is commonly called, falls heavily on the beach, or against the rocks, breaking the largest stones into pebbles, and grinding the pebbles into sand. During gales, this action is greatly increased, and the dissolving rocks render the waters turbid several miles from the land. This effect is also produced by landslips, where large collections of rock, gravel, and soil, covered perhaps with trees, become loosened by the escaping frosts, or the breaking out of a spring, and are launched downward to the beach, or into the waters of the Bay.

From these combined causes, and many others which might be mentioned, the shore at many places is rapidly wasting away, and the sea is making annual encroachments upon the land. In other instances, the united powers of the tide and waves wear out rude caverns, and with uncouth sculpture, form isolated blocks, which, at a distance, resemble the work of art.

The sediment produced by these operations on the sea coast, is transported by the tides to the banks and mouths of the river, issuing from the low grounds, and thus the extensive marshes of Westmoreland and Cumberland have been formed, and are daily increasing in *magnitude*. These are the means by which not *only the geographical features of a country are*



changed, but its agricultural character is improved by these operations of nature, which, from the naked sterile rock, produces a fruitful soil, and whole tracks of arable land are deposited along the vallies, to feed the cattle of a thousand hills.

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**NOTE.**—The following is the Relative Extent, Elevation, Depth, &c. of the Great North American Lakes :—

The Ontario, is 180 miles long, 40 miles wide, 500 feet deep, and its surface is counted at 231 feet,—elevation above the tide-water at Three Rivers, 270 miles below Cape Saint Vincent.

The Erie is 270 miles long, 60 miles wide, 130 feet deep, and its surface is ascertained to be near 455 feet above the tide.

The Huron is 250 miles long, 100 miles average breadth, 900 feet deep, and its surface is nearly 595 feet above the tide-water.

The Michigan is 400 miles long, 50 miles wide, its depth and elevation the same as the Huron.

Green Bay is about 100 miles long, 20 miles wide, depth unknown, elevation the same as the Huron.

Lake Superior is 490 miles long, 100 miles average width, 900 feet deep, and its surface is 168 above the tide-water.

Bottom of Lake Ontario, 262 feet below the surface of the tide-water ; Huron, 365 do. ; Michigan, 305 do ; Superior, 305 do.

## CHAPTER VII.

The subject of Emigration—Directions to Emigrants in preparing for Embarkation—Medicines Required for the Voyage—Instructions on Landing—How to obtain, select, and cultivate Land—Directions how to Build a House, Barn, &c.—Agriculture, Soils, Manures, &c.—Public Functionaries—Insurance and Joint-Stock Companies—Banks—Societies—Counties—Parishes—Roads—Information to Travellers—State of the Weather in each month in the Province—Remarks on the North-East Boundary Question—the Extent of the British Territory in British North America—Poetry.

THE subject of Emigration is rising in importance from year to year, and cannot lose its interest as long as misery and discontent exists among the working classes. Emigration has recently changed its character. The poor artisan and the humble peasant, are not at the present time the only class of persons who think of leaving their native shore, to those beyond the wide Atlantic.

*Every month these extensive and fertile regions are coming more and more under the no-*

tice of capitalists. Not only farmers, master tradesmen, but our middle class of society, and the wealth from this source alone, which will be speedily poured into British North America is incalculable, both as to its amount and its results on the surface of the country. It may be anticipated that, in a few years, large tracks of country in these valuable colonial possessions will be as well settled, and cultivated, and regulated in their affairs, both public and private, and therefore, as civilized and refined, as many of the moral districts in Great Britain.

Many persons shrink from the idea of emigrating, because it appears like a confession that they have been baffled at home—at that, where others have been successful—they continue to linger on, desirous to obtain the credit of patient well-doing and resignation, to unavoidable troubles, than to encounter what they are led to suppose the reproach of leaving the country. All persons should recollect that the same perseverance and sobriety which, in this country, is only sufficient to keep their families from distress, will, in a more favourable field of industry, place them in comfort and independence. The abundance of unoccupied land in New-Brunswick, only require the hand of man to convert it into the means of human sub-

stance, and every one who goes, makes work for those who follow. The competition of one man against another in this country is so great, that young people, accustomed to laborious occupations, often seriously hurt their constitutions by working beyond their strength, for the purpose of keeping their situations, or to obtain employment. In America, the competition of one man against another is by no means so strong; good wages may be made by moderate exertion at all the ordinary and useful trades, and those accustomed to farming, will find a ready demand for their labour, with excellent wages, and without the fear of losing employment when their strength is exhausted. It requires a little firmness to determine on leaving our own country. The resolution once taken—the chief difficulty is surmounted. The success and comforts of those who have already emigrated, leave little room for perplexity or uneasiness with regard to others,—*justus propositi tenet*.

Those who intend to embark to a foreign shore, will do well to attend to the following instructions:—On engaging a passage, inquire for a vessel not less than six feet between *decks*—a steady captain, and well-known. If *you take not the cabin*, choose your berth as

near to the centre of the vessel as you can, *i.e.* half way from the bow to the stern; in this part there is less motion when at sea, than in any other. There are two conditions under which you can engage your passage; *first*, To find your own provisions: in this case, those with whom you engage a passage, finds fuel, water, and berths.

*Secondly*, To be found in what you may require during the voyage, bedding excepted, the places for these only provided. In most vessels you may choose either of the ways. If you conclude to find yourself, provide similar kinds of food to what you have been most accustomed to at home, and the same quantity to what you have been used to for about six weeks. Potatoes are more palatable at sea than on land. Coarse ship-biscuits are the best you can take; at the same time, you must provide yourself with bedding and medicines—bedding, except in the Liverpool Packets, is never provided—medicines, you will require of a purgative nature; about two dozen of aloes pills; if you dissolve six table-spoonfulls of the best Epsom Salts, and three of Cream-of-Tartar, in a quart bottle, filling it with fresh water, you will find by taking a wine-glass full before breakfast, great benefit therefrom. If you have a family,

it will not be amiss to take two pounds of Epsom Salts, and one pound of Cream-of-Tartar. Take also one ounce of Aromatic Elixir of Vitriol, it is for purifying the water you drink, which at sea, sometimes become very unwholesome; from ten to fifteen drops will be sufficient for one tumbler of water. Take also some vinegar to use with your sea provisions, which are all salt; some sprinkled about your berth will be of great service.\*

The following articles you must provide yourself with before you sail:—tools of all descriptions can be obtained cheaper and better here than in America. If you are a mechanic, take with you those suited to your own trade—clothing for your own wear, especially flannels, druggets, printed calicoes and woollens, such as merinoes and coarse pelisse cloths. The next, and not of the least importance, you ought to be in possession of, is a certificate from your

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\* Voyage out from the United Kingdom.—Vessels bound for St John's or Chatham, Miramichi, will be found at all the principal ports in England, Scotland, and Ireland, upon application to the ship-owners. Passage-money in the first cabin, with provisions for a grown person, is £20; in the *steerage*, £7; in the first cabin, without provisions, for a *grown person*, is £10; in the *steerage*, £3; children in the *first cabin*, without provisions, £2.



minister, and should it simply state who and what you have been known to be—what is your object or reasons for emigrating? But the best recommendation you can have, is a letter from some person who has known you here, and who has a friend or acquaintance in the place you intend residing, to whom he can address. Should you fail in these, you must make up your mind to wait until your own actions can speak for you. A pocket compass will be of great service to you. There are many instances of persons getting lost, and wandering for days and weeks in the woods of America. If you lose yourself in the woods, select a course, and follow it, turn neither to the right nor to the left, till you come to a road—without a compass, you cannot be sure of proceeding a straight course.

If, on landing, you intend to purchase a quantity of land, it will be best to apply in the following manner :—

**To His Excellency Major-General, &c.**

*The Petition of —, of the Parish of —, in the County of —*

HUMBLY SHEWETH,

That he is a British subject, born in — — —, and does not own any land. That he wishes to obtain, by purchase, a tract of land, for immediate settlement, containing — acres, and situated as follows, — — —

said land is at present in a wilderness state, no improvement having been made thereon, and he requests that he may be allowed to purchase it at — per acre, payable — —, and, if so allowed, he is prepared to, and will settle himself upon, and improve the same forthwith, and conform in all respects with the regulations for granting land.

And as in duty bound, will ever pray.

— — —.

If you are a first-rate mechanic or artisan, and contented with your trade, remain in the large towns in which there are people who have money to spare for matters of taste. If your moral conduct be good, you will find yourself much higher, comparatively, upon the scale of respectability, but otherwise, you will not be much different from what you might be in the metropolis of England, Ireland, or Scotland. But if your calling be less independent upon the superfluities of the rich, remain not in the cities and ports any longer that you can help.

With reference to land fit for settlement, that is to be found in abundance, and of excellent quality; as, notwithstanding the case with which men of wealth were enabled formerly to appropriate to their own use extensive tracks of country, still there are thousands of acres spread over a wide extent, upon which large bodies of *settlers* can be located with advantage, and who, *after a few years of moderate toil and exertion,*

will find themselves in possession of a property that will every year become more valuable ; and who may secure for their relations, &c., permanent comfort and a prosperous condition. There are various parts of the Province, however, to which I could not possibly advert, and which, having been long settled, may not offer inducements to the man of property, but where the industrious emigrant, whether male or female, will be certain of obtaining employment, provided an exorbitant rate of wages is not required. If single men would be satisfied with from £20 to £30, per annum, exclusive of their board and lodging, and would hire out for about three years, they would soon obtain the requisite sum to procure a hundred acres of land, which is from 2s. 6d. to 3s. 6d. per acre, and which would be sufficient for any man. And were young persons of either sex, to engage themselves in this way, they would be certain of succeeding to comfort and independence—would become useful members of society—and would strengthen those ties by which this Colony is already attached to the Parent State, and render it secure against foreign aggression.

Be not too hasty to make a purchase, or a settlement, you may obtain wild lands nearly in every country ; by going a few miles from the

principal roads, you may obtain cultivated farms, with respectable houses, and strong fences upon them, but still may have all the substance wrought out of them ; and, on the other hand, you may obtain those which are not so impoverished, yet may have some material disadvantage, well known to the man of experience. It will be to your advantage to spend a year or so in examining the different parts, so that you may judge for yourself. Uncultivated lands, perhaps, may be the only ones that will meet your means ; but the habits and privations of a frontier life—of living in the woods, are too great a contrast to what you have been accustomed to, for you to enter upon them all at once. You have been used only to one kind of work ; it is only in the villages that you can find enough, or perhaps any of this kind of work to occupy you. If you are a farmer, it is only to the already cleared and improved lands that you can turn your hand. By close industry and frugality, (and by those of your family, should you have one,) you should be able to add to what capital soever you may be in possession of, whilst, in the course of acquiring the knowledge and information which I have endeavoured to lay before you, that you stand in

need of, to assist you in doing this, I offer you the following considerations :—

The localities of a place, are those other places, conveniences, or things that stand connected with it, *viz.* towns, by-roads, schools, churches, mills, water for drinking, and healthiness in general. In this country, these things seldom occupy our thoughts in removing from one place to another; but in the interior of America, their value is known, because the want of them is frequently felt.

Towns you are near to, in effect, if you are on a good road, or a canal leading to them; besides all along these, there are generally stores established, at which you can dispose of produce, and purchase such things as you require, if inconvenient for you to attend the principal markets.

By-roads must be considered by you in more ways than one. These are opened up, and kept in repair by the land proprietors in their vicinity, who are assessed to work upon them a certain number of days in the year, according to the value or extent of their property; and the better they are, and the more of them completed,—(for, according to the district plans, they are generally very numerous, although only one at a time may be opened,) the less pro-

prietors are to be assessed, the more valuable will be their properties. Wild lands have been divided into lots, and sold at 2s. 6d. per acre. Chopping, that is, felling the trees, and cutting them up, you may have done for about £1, 4s. per acre. Logging, that is, removing the principal part of the timber from the ground, and piling and burning up what is of no use—this will amount to £1, per acre. Fencing into six acres' lots for 10s. A log cabin may be built for about £12; a log house, £32; a barn for £24; frame houses and barns are about three times the sum.

The utensils you will require, are as follows : A four-wheeled waggon, which may be drawn either by horses or oxen, will cost about £12; a horse and harness, £16; an ox, chain, and yoke, £7; a plough, £1, 5s. Stock, a pair of horses, £25; a yoke of oxen, £10; a cow, £5, and furniture you can obtain very cheap—the principal part of which is made of native wood, such as beech, birch, maple, and pine. Large stoves are in general used; those stand in the middle of the floor, and are so constructed, as to answer either for boiling or baking.

Those who intend to settle in the woods, the following remarks will be of service to them:—*The first habitation which a settler ought to*

have, is a log house; the walls are contrived in the same manner as a school-boy makes a crib, except that they must be upright, but like that, they have corresponding notches cut out of the ends of the respective logs, that their adjoining surfaces may close with as little space as possible between them, and that the angles may thus be strongly braced. The elevation must depend on the room required within; where upper apartments are intended, it must rise accordingly. In the formation of the roof, however simple, much accuracy is to be observed.

Black ash and bass-wood are considered best adapted for this purpose—the steams should be upwards of fourteen inches in diameter, straight, clean, and easily split. Having cut them into lengths corresponding with the pitch of the roof, they must be cleft asunder, and hollowed out by the axe. These are ranged in sufficient number from front to rear, in the line of the roof, with the hollow side uppermost, and over them are arranged alternately, an equal number with the round side uppermost, so that the adjoining edges of each two of the upper logs meet in the hollow of that beneath them, whilst the adjoining edges of each two of the lower logs are covered by the hollow of that which is *above them*, that forming a compact roof, per-



fectly water-tight, as the hollow of the under logs carry off all rain that may fall through the joints of the upper surface, and the roof continues firm as long as the timber remains undecayed.

This being completed, means must be taken to admit both the family and the light. The opening for the doors and windows, are then formed in the walls by cross-cut saws or an axe. The chimney is then built with mud, if stones cannot be obtained. The filling up of the vacancies between the logs, with mud and moss, afterwards takes place. The floor is then formed of cleft planks pinned to logs sunk in the ground, and levelled with an adze. The interior partitions, &c. may be got forward by degrees; but the oven, which is an essential, must be completed as soon as possible. Stones or brick must be obtained for this for security against fire, but mud must serve as mortar. It is heated with pine, or very dry wood cut into small pieces, and burnt in the oven to ashes, which being swept out, the bread is baked as in the common brick oven in England. Thus, at the end of a month, the preparations are completed.

As the settler finds his circumstances improving, he can either enlarge his present habi-

tation, or build a frame-house. A barn and other offices are successively raised, of square blocks of wood, and with a rapidity which is quite surprising—the circumstances and habits of the country providing assistance for those who may require it. Those who have been for several years in the vicinity, if solicited, will have their assistance. The wood is first felled and cut into proper lengths and squared, then drawn together with oxen to the place required, and raise up your house. Such is the kindness of the more established settlers, that they will dispense with you giving them a breakfast and dinner. It will be expected, and very fair, that you will repay these acts of kindness, by giving labour in return on similar occasions.

Every person going into the woods, would do well to take the following articles,—one American axe, hand-saw, auger, pick-axe, spade, hammer, iron-wedge, kettle, frying-pan, iron-pan, iron pot, two gimlets, three hoes, nails, a small portable hand-mill for grinding corn.

To those persons who intend to settle on entire wood-land, I would recommend the following system:—clear well at first a few acres in the immediate vicinity, and round the site on which you intend to build your house, that the trees left stand may be at sufficient distance to

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be out of danger of falling on it ; at the same-time let a small piece be fenced off for cattle to lie in at night, and to be out of danger in windy weather ; then cut from ten to fifteen acres ; the small trees and under brush-wood burn, and girdle the remainder of the trees ; sow this ground with oats in the spring, with them clover, and a small quantity of grass seeds mixed. The clover and grass to be mowed the first two years, and grazed afterwards. Continue doing the same the next year with a still further quantity, and so on for six years, and likewise clear a small piece off for corn, potatoes, cabbage, &c. in front of the house next the road. In about six years, the roots of the trees will be rotten, and several of the girdled ones fallen, then begin to chop down twelve or eighteen acres of these girdled trees yearly in a dry time, felling them across each other to break them into pieces ; put fire to them in various parts of the field, and it will burn most of them up. It is necessary to keep a watch over the fences while this is going on, to prevent them from taking fire. After this, you may plough and plant what you please, as the ground will be in good condition.

*It is necessary to explain the term girdling—(the larger trees only are girdled, those which*

do not exceed one foot in diameter, are cut down)—which means, making an incision of about three inches deep round the trees, at the height at which it is usually cut down four feet from the bottom; this kills the trees which remains thus cut, until their is time to cut down and clear them away; the object is to prevent the trees from overshadowing the crop near them. The cut ought not to be so deep as to cause any danger of the tree falling from the winter blast, lest it might fall on the cattle. A small cut effectually destroys the circulation of the sap, and of course, the vegetation of the tree, and this is the object to be obtained; take great care when the tree is falling—the boughs when recoiling from the ground, sometimes give a severe and dangerous blow to the woodman. An acre may be rendered fit for culture for about £2, when partly chopped. After the trees are cut down, it is usual to leave the stump and roots standing, until age destroys them. The reason why the stumps are not rooted out, is because time is too valuable to be expended in any labour not immediately profitable.

By clearing away the trees which obstruct the passage of light and air, enough is done to ensure a succession of crops; and as the intro-

duction of the plough at first is not essential, the loss of ground is merely that occupied by the stumps and their roots; the more that is cleared in a rough way the better; the clearing of the stumps is to be an after consideration, when you have disposed of the trees, and raised crops sufficient to render you independent. If a man's labour can clear six acres of the overshadowing timber, in the time which it would require to clear one acre of roots, and all, and that those half-a-dozen of acres could be brought into immediate tillage, it follows, time would be misspent, in the first three years of settlement, in taking out those stumps.

The land, as soon as the trees have been hauled off, can be planted with potatoes and Indian corn, and the mode which you are to pursue is very plain,—plant three cuts, six inches apart, with a hoe or spade, in holes three feet asunder, and as the potatoes grow up, hoe them up into hillocks. If your potatoes are early out of the ground, they can be succeeded by wheat, harrowed in around the stumps.

The mode of sowing Indian corn, is to drop about three grains into small holes made with a hoe, in the same way, but not at so great a distance as for potatoes. This corn is valuable *to man and beast*. The season for planting is

in May, but it will not be too late in June; the stalks are very nourishing for cattle; it is ripe in September.

PUBLIC FUNCTIONARIES RESIDING IN ST JOHN.

Thomas Leavitt, Esq. Consul of the United States, and Agent for the Marine Insurance Company of New-York, and Underwriter of Liverpool.

W. P. Ranney, Esq. Agent for Lloyd's.

Alexander Wedderburn, Government Agent for Emigrants.

Edward Ward, Assistant Emigrant Agent at Fredericton.

Henry C. D. Carmen, Esq. Consul for the United States at Miramichi.

Hon. Thomas C. Lee, James A. M'Lauchlan, William Tyng Peters, and Moses H. Perley, Esquires, Commissioners for Indian Affairs.

INSURANCE AND JOINT-STOCK COMPANIES.

New-Brunswick Fire Insurance Company (in St John) Capital £50,000.

Central Fire Insurance Company, (in Fredericton) Capital £50,000.

New-Brunswick Marine Assurance Company,  
Capital £50,000, with power to increase to  
£100,000.

Marine Association, (St Andrew's.)

St John's Bridge Company, Capital £20,000.

St John's Water Company, Capital £20,000.

St John's Mechanics' Whale Fishing Company,  
Capital, £50,000.

St John's Mills and Canal Company, paid up  
Capital, £40,250.

St John's Mills and Manufacturing Company,  
Capital, £25,000.

Lancaster Mill Company, Capital £100,000,  
with power to increase to £300,000,—amount  
of Capital paid £35,000.

Sheffield Mills and Land Company, Capital  
£10,000, with leave to increase to £40,000.

Tobique Mill Company; Fredericton Steam-  
Boat Company; St John's Stage-Coach Com-  
pany; Woodstock and Fredericton Stage  
Company; St John's Hotel Company.

#### BANKS.

Bank of New-Brunswick, (in St John's) capital  
£100,000—Thomas Leavitt, Esq. President.  
*Commercial Bank of New-Brunswick, (in St*



John's) incorporated by Royal Charter, capital £150,000, with power to increase to £300,000—Lewis Burns, Esq. President.

Commercial Branch Bank, (at Miramichi) acting Cashier at Chatham—H. Wisewell, Esq.

Commercial Branch Bank, (at Fredericton)—Archibold Scott, Esq. Cashier.

Commercial Bank, agency at Woodstock,—G. F. Williams, Esq. Cashier.

Central Bank of New-Brunswick, (in Fredericton) capital £35,000, with power to increase to £50,000—W. J. Bedell, Esq. President.

Central Bank Agency, (at Woodstock)—A. B. Sharp, Esq. Agent.

Charlotte County Bank, capital £15,000, the Hon. Harris Hatch, President.

St Stephen's Bank, capital £25,000,—William Porter, Esq. President.

Bank of British North America, (established in London) capital £1,000,000, in 20,000 shares, of £50, (three-fourths of which have been subscribed in England, and the remainder in the North American Colonies,) with power to increase the capital,—Alfred Smithers, Esq. Manager of the Branch at St John's; Fredericton Branch,—George Taylor, Esq. Manager; Miramichi Branch,—Robert Cassels, Esq. Manager; City of St John's Savings

Bank, (in St John)—His Excellency the Lieutenant-Governor, Patron; the Bank of New-Brunswick, Treasurer; Daniel Jordan, Esq. Cashier and Registrar.

#### SOCIETIES.

Bible, Tract, Benevolent, St George's, St Andrew's, St Patrick's, Albion Union, Friendly Sons of Erin, Orphan, Shipmasters', Temperance, Friendly Fire Club, Union ditto, Protection, Marine Hospital for Relief of Disabled Seamen, Chambers of Commerce, (Companies,) Bridge-Water Insurance, Central Fire Insurance, Marine Assurance, Mechanics', Salmon River, Coal Mining, Whale Fishery, Mill, and Canal Land, Stage Coach, Floral and Horticultural.

#### COUNTIES AND PARISHES.

YORK.—Fredericton, St Mary's, Douglas, Kingsclear, Queensbury, Prince William, Southampton, Dumfries.

CARLTON.—Woodstock, Northampton, Kent, *Brighton*, Perth, Wicklow, Wakefield, *Andover*, *Madawaska*.

ST JOHN.—City of St John, North and South Districts,—Parish of Portland, Parish of Carlton, Parish of Lancaster, Parish of St Martin's, Parish of Simonds, North and South Districts.

KING'S.—Kingston, Sussex, Hampton, Norton, Westfield, Springfield, Greenwich, Sutdholm, Upham.

QUEEN'S.—Gagetown, Canning, Wickham, Waterborough, Brunswick, Hampstead, Johnston, Petersville, Chipman.

SUNBURY.—Mangerville, Sheffield, Burton, Lincoln, Blissville.

WESTMORELAND.—Dorchester, Sackville, Westmoreland, Botsford, Shediac, Moncton, Salisbury, Coverdale, Hillsborough, Hopewell, Harvey.

NORTHUMBERLAND.—Newcastle, Chatham, Ludlow, Northesk, Alnwick, Blissfield, Blackville, Glenelg, Nelson.

KENT.—Richibucto, Carleton, Wellington, Dundas, Weldford, Huskisson, (*without population*)—Harcourt, (*without population*.)

GLOUCESTER.—Saumarez, Caraquet, New-Bandon, Beresford, Bathurst.

RESTIGOUCHE.—Dalhousie, Addington, Durham, Colburn, Eldon.

CHARLOTTE.—St Andrew's, St Stephen's, St

David's, St George's, St Patrick's, St James', Pennfield, Grand Manan, West-Isles, Campo-Bello.

#### INFORMATION TO TRAVELLERS.

British and North American Royal Mail Steam Ships, of 1250 tons burden, and 440 horse power, under contract with the Lords of the Admiralty.

The mails from North America are made up in London on the 3rd and 18th of March, April, May, June, July, August, September and October, and on the 3rd of November, December, January, and February; and a Steamer starts on the next succeeding days from Liverpool, for Halifax and Boston, with the mails. When the 3rd or 18th falls on Sunday, the mails is made up in London on Monday, and the Steamer starts on Tuesday. Returning, a Steamer leaves Boston on the 1st and 16th, and Halifax on the 3rd and 18th of March, April, May, June, July, August, September, and October; and Boston on the 1st, and *Halifax on the 3rd of November, December, January, and February.*

The passage from Liverpool to Halifax is made in about eleven days, and from Halifax to Liverpool in ten.

Passage-Money £25, from Halifax to Liverpool. From Halifax to Boston, twenty dollars. These ships carry experienced surgeons. The Unicorn plies between Pictou and Quebec, in connexion with these places.

During the Summer months, Steamers ply twice a-week between St John, N.B., and Windsor, N.S., (forty-five miles from Halifax), also between St John and Annapolis, St Andrew's, St Stephen's, and East-Port, Moose Island, U.S. three times a-week; to Boston, weekly; and daily to Fredericton.\* Stages leave St John three times a-week for St Andrew's, and four times a week for Dorchester, (on the post-road to Halifax) branching off to Richibucto, Miramichi, Bathurst, &c. In winter, stages leave St John for Fredericton every day, whence the lines extend all the year to Woodstock, on the route to Canada and the United States.

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\* Steerage Fares by the Steam-Boats from St John's to Fredericton, are one dollar, or 4s. each passenger, and 10s. per ton of luggage; if in considerable quantities, less is charged.

## ROADS AND DISTANCES IN THE PROVINCE.

<i>From St John to Fredericton, via Kingston.</i>		<i>From St John to Quaco.</i>	
	Miles.		Miles.
To Black's Farm,.....	7	The Mash, .....	3
Gondola Point, .....	9	Lochlomond, .....	8
Kingston, .....	4	Jones', .....	3
Head of Belleisle,.....	11	Beatty's, .....	6
Washademoac,.....	13	Paterson's, .....	5
Jemseg Ferry, .....	8	Quaco (or St Martin's,)...	6
Tilley's, (Sheffield) .....	13		31
Perley's,.....	8		
Fredericton, .....	12		
	86		
<i>Ditto to Fredericton by the Nerepis.</i>		<i>From St John to Shepody.</i>	
Yorkshire Tavern, .....	4	To Lochlomond (Cody's,) ..	11
Brundage's, .....	10	Atkinson's Chapel, .....	10
Douglas Arms, .....	4	Barnes' Bridge, .....	4
Purdy's, .....	12	Little River Chapel, .....	6
Gillan's, .....	10	Londonderry School, .....	10
Smith's, .....	7	Head of the Settlement,...	4
Morison's (Oromocto,).....	7	M'Manus' Farm,.....	6
Fredericton, .....	11	Dorman's, through the Por- tage, .....	12
	65	Shepody Chapel, .....	12
			77
<i>From St John to St Stephen's, via St Andrew's.</i>		<i>From St John to Halifax, via Amherst.</i>	
Lake Field, .....	9	To Hennigar's, .....	9
Musquash, .....	6	Ketchum's, .....	7
M'Laughlin's, .....	7	Hampton Ferry, .....	7
Grey's, .....	5	Baxter's (Finger-Board,) ..	10
M'Gowan's, .....	6	The Valley Church, .....	13
Watter's, .....	8	M'Montagle's, .....	10
St George's, .....	9	M'Leod's, (Portage,) .....	12
St Patrick's, .....	10	Pittfield's, .....	13
St Andrew's, .....	12	Nixon's, .....	12
St Stephen's, .....	16	Lewis', .....	12
	58	Charter's, Memramcook, ..	16
		Hickman's, Dorchester,...	8
		Westcock, .....	7
		Tantamar, .....	10
		Amherst, .....	9

*To Halifax from Amherst.*

	Miles.
To Stewart's,.....	10
Hewson's River Philip, ...	9
Purdy's (Mountain).....	10
Sutherland's,.....	6
Yewill's, Londonderry,)...	10
Blanchard's, Truro,.....	15
Hill's, Stewiacke,.....	17
Miller's, Guy's River,.....	9
Keyes', .....	10
Shultz's,.....	9
Halifax, .....	11
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From St John to Halifax, 270

*From Fredericton to Richibucto,  
via Miramichi.*

To Brown's, .....	11
Young's,.....	10
Boie's Town,.....	25
Hunter's, .....	14
De Cantline's, .....	10
Cochrane's, .....	14
Parker's, .....	13
Newcastle,.....	10
Chatham, (Miramichi,)....	6
M'Beath's,.....	12
Dicken's Bay, (Duvine,) ...	10
Rankin's (Richibucto,) ....	12
	<hr/>
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*From Richibucto to the Bend.*

Harris', .....	8
Little Buctouch, .....	9
Cocaigne Bridge, .....	9
Shediac,.....	9
To the Bend,.....	15
	<hr/>
	50

*Chatham to Bathurst.*

To Goodfellow,..... 6

Miles.

Curry's,.....	8½
Forem's, .....	15
Lee's, .....	9
Bathurst Court-House, ...	9½
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*From Bathurst to Restigouche.*

To Arisneaus, .....	12
Daley's, .....	12
Harvey's, (Nash Creek) ..	10½
M'Pherson's, (Old Place, ..	9½
Dalhousie,.....	10
Reed's, .....	9
Cambleton, .....	9
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	70½

*From Fredericton to  
Quebec.*

To Burgoyne's Ferry,.....	16
Munroe's, .....	13
Guion's, .....	5
Jones' .....	17
Woodstock Court-House, ..	8
Victoria, .....	8
Applesley's, .....	13
Band's, .....	18
Tibbet's, .....	10
Restook, .....	3
Grand Falls,.....	18
Coomb's, .....	12
Vital Thibideau's, .....	15
Entrance to Madawaska, ..	10
Lake of Temiscouta, .....	24
The Portage, .....	14
River St Lawrence,.....	36
Kamouraska, ...	18
St Ann's, .....	22½
Riviere wielle, .....	22½
St Thomas', .....	15
St Joseph's, .....	18
Port Levi, Quebec,.....	12
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STATE OF THE WEATHER IN EACH MONTH IN THE  
PROVINCE.

*January* may be considered the coldest month, the average temperature being from  $10^{\circ}$  to  $14^{\circ}$ . It drops sometimes  $10^{\circ}$  or  $15^{\circ}$  below zero, and remains so for three or four days together.

*February* usually commences with extreme cold, the temperature seldom ranging above  $12^{\circ}$ . Snow storms are violent and frequent; the sun, however, before the end of this month, shews gradually his increasing power, and iceicles are seen hanging from the roofs of houses in sheltered situations.

In *March*, clouds of hail and sleet sweep along the streets with a force hard to be withstood by man or beast. Cold must be endured in all its variety; on one day the ground presents to the eye a surface of deep fresh snow to wade through—before night, perhaps a fog sets in with a rapid thaw. Heavy rain succeeds, and torrents of water and melted snow rush down the streets towards the sea. The compact mass or cake of ice with which the whole surface of the ground in the town is covered, *now begins to make its appearance, and walking becomes even more disagreeable and dan-*

gerous than ever. This mass of ice is full two feet thick, and cracks into fissures, which form, as were, the beds of little rivers, which discharge the melted snow into the sea.

In *April*, the weather is severe and variable. Large quantities of snow fall during the month. The heat of the sun in the middle of the day is too great to allow it to lie long on the ground, scarcely two days at the same time. Sometimes the snow is deep and fresh, at other times soft and sloppy, and again, covered with a crackling coat of ice. Then the north-west wind rages, and calls forth the powers of the young and active, to make way against its force.

In the month of *May*, the weather has but little improved. The snow falls heavily at intervals, and, melted by the increased power of the sun, mixes with mud till the streets are like a bog, and would be considered in any other part of the world impassable. The variations of temperature are excessive—keen frosty winds, and a warm sun, acting together, try the weaker constitutions, nevertheless, those troubled with rheumatism, do not complain.

In the month of *June*, the sun begins to be really powerful; the trees begin to show the first tinge of green. Floating islands of ice, which surround the coast at this season of the

year, influence the climate most considerably ; till these gradually recede, and becoming porous, sink to the water's edge, the weather is never settled and warm, for in the hottest day, whenever the wind happens to blow from the sea, it drives before it a dense chilling fog, like a moving pillar, over the town ; there, while it rests, the changes of the atmosphere is violent in the extreme ; the very eyes feel cold ; and the sea breeze, which in England invites the invalid to the coast to inhale its freshness, drives the New-Brunswicker within the walls of his house. This evil, however, is of short continuance, for the ice islands, on whose gelid surfaces these damp fogs have been engendered, melt by degrees, and, dispersing themselves over the ocean, cease for the remainder of the year to interfere with the sun's dominion.

*July* and *August* are the hottest of all, the sun being usually powerful and oppressive. The uniform heat is greater than in England.

In *September*, the evenings become cold, with frosts, increasing in severity, to the end of the month.

In *October*, the temperature falls, perhaps, to 25° of Fahr. with rough gales from the north-west, sweeping the frozen continent, and answering to our easterly winds. The weather, how-

ever, is variable, some days still being very warm.

In *November*, a succession of bright sun-shiny days generally prevails. The fresh frosty air, and bright sun, have acquired that season, the appellation of the Indian summer. The variation of temperature towards the end of the month is very great; sometimes as much as  $40^{\circ}$  in the twenty-four hours. Some days are close and foggy, others clear and intensely cold.

In *December*, the snow before the middle of the month, begins to lie on the ground, the average temperature being about  $20^{\circ}$ .

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REMARKS ON THE BOUNDARY QUESTION,  
BETWEEN  
GREAT BRITAIN  
AND THE  
UNITED STATES OF AMERICA.

IN taking a rapid review of the position in which the Boundary Question remained for a short time, in 1783, the territory could scarcely have any intrinsic value, and if a more distinct and intelligible line of boundary was not laid

down, this omission did not proceed from any desire to leave in doubt an unsettled point, on which disputes might arise in after times. On the contrary, we believe that no men could have been more anxious than were Adams & Franklin, that the treaty to which their honourable names were fixed should correspond with its avowed intention,—“ that of establishing such a beneficial and satisfactory intercourse between the two countries, upon the ground of reciprocal advantage and mutual concessions, as might best promote and secure to both, perpetual peace and harmony.

TREATY OF PARIS.—In this treaty, the Boundary intended to be fixed, is described as follows :—“ From the north-west angle of Nova-Scotia, viz. that angle which is formed by a line drawn due north from the source of the St Croix river to the Highlands, along the said Highlands which divide those waters which empty themselves into the River St Lawrence, from those which fall into the Atlantic Ocean, to the north-western-most head of the Connecticut river.”

*Not proceeding any further in the present extracts, because it is on the construction of these words that all the existing difficulties*



arise, the points to be solved are, *first*, What was the river St Croix? What was the range of hills designated by the Highlands? And as connected with the *second* question,—What rivers were meant by those described as falling into the Atlantic and the St Lawrence; and, *lastly*, What was the north-west head of the river Connecticut?

In 1794, a treaty of amity was made between Great Britain and the United States, the object being to ascertain what river was meant by the name of the St Croix? By the fifth article, commissioners were appointed and authorized to decide according to evidence on oath, and it was further agreed, that their report was to be “final and conclusive.” The report of that commission was made. It appears very probable that the point fixed upon by them as the source of the St Croix, was about twenty miles too much to the east-ward, and that there was, consequently, a corresponding sacrifice of territory made by England. But the award was held to be “final and conclusive,” according to the terms of the treaty, and as such, it has been acquiesced in. Here we see that one of the points in dispute was very fortunately, not, perhaps, very correctly ascertained; and it is much to be regretted,

that at the same period, the other lines were not struck out before any border quarrels had arisen, and false standards of this planted national had been raised up.

In 1814, the unfortunate hostilities between the two countries were terminated by the treaty of Ghent. In the fifth article, it is declared, "that neither the point designed in the treaty of Paris, as the north-west angle of Nova-Scotia, nor the north-west head of the Connecticut, had been ascertained, or the line of the Highlands surveyed. Two commissioners were appointed to declare the boundary, and to make surveys of the line of the treaty of 1783, laying it down upon a map—which map and declaration, the contracting parties agree to consider as fixing the said boundary finally and conclusively. A provision is subsequently made, that in case of a disagreement between the commissioners, a reference should be made to a friendly sovereign or state. The commissioners not being able to agree on a Boundary Line, a convention was entered into at London in 1827, by which it was agreed to refer the question to the decision of a friendly sovereign; and the fifth article provided, in the spirit of *the previous engagements*, that "the decision of the arbiters, when given, shall be taken as



final and conclusive, and shall be carried, without reserve, into immediate effect by the contracting parties. The king of the Netherlands was subsequently named as the arbitrator, and his award was given in 1831. In that award, the king of the Netherlands negatives the line claimed by Great Britain, as well as that claimed by the United States. The award sets forth,—“*Que la nature du differences, et les stipulations, vagues et non suffisantes determinees du traite de 1783; n'admettant pas d'adjuger l'une ou l'autre de ces lignes, a l'une des dites parties sans blesser les principes de droit et d'equite en vers l'autre.*”\* And the arbitrator proceeds to state,—“*Nous sommes d'avis, qu'il conviendra d'adopter pour limite de deux atas une ligne tiree,*” &c.†

Now, let our readers observe, how strongly marked was the intention of the parties to the treaties of 1814 and 1827—that the decision,

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[TRANSLATION.]

\* That the nature of difference, and the stipulations, loose and not sufficiently determined at the treaty of 1783; not allowing to judge the one or the other of these races, from the one of these said parties, without offending the principles of the law and justice towards the other.

† We are of opinion, that he will agree to adopt measures for the limit of one race extracted, &c.

when given, should be final and conclusive; how greatly it was the interest of each country, looking beyond the lesser and mere temporary interests of the day, that a decision should be authoritatively pronounced, agreed to, and carried into effect. This desire is in conformity with the principles laid down by Franklin and Adams in 1783, and is in conformity likewise with the acts of the parties to the convention of amity in 1794.

To us it would undoubtedly appear, that the spirit and the letter of the obligations contracted, required immediate adoption of the terms of the award of the king of the Netherlands. It must be remembered, that this decision imposed upon England a much larger sacrifice than that required from the United States; indeed, above three-fifths of the disputed territory were awarded to the latter. The conduct of the British government was frank and honourable.

The award of the king of the Netherlands bore date, 10th January 1831. On the 9th of February, Lord Palmerston informed the British minister at Washington, "that whatever *might* be the sentiments or wishes of His Majesty on some of the points embraced in the award; His Majesty has not hesitated to ac-

quiesce in that decision, in fulfilment of the obligations which His Majesty considers himself to have contracted by the terms of the convention; and His Majesty is persuaded, that such will be the course adopted by the government of the United States."

It is very much to be regretted, that these expectations were not realized, but on the contrary, and that in consequence of difficulties. We shall pass over the appointment of Mr Preble, who was described in the message to Congress, in December 1831, from which appointment, difficulties arose, the explanation of which we shall not here mention, but observe, that to the American, these transactions must read the useful lesson of mistrust with respect to the conduct and pretensions of its border population. Whilst firm in their resolve that the people of Maine should not suffer wrong, the United States should be equally resolute to prevent them from committing injustice; above all, the great American community should reject those counsels which may lead to war; a lesson will also be read with profit to England by the same events. They must learn to discriminate between the imprudent acts, and unreasonable complaints of a few borderers, and the feelings and the determination of a

great people. *Nequis simam pacem justissimo bello antefero*,—is an admission which neither England nor the United States is called upon to make ; but each should be prepared to act upon the principle, that any sacrifice which does not compromise national honour and independence, should be made, in order to avert that worst of all calamities to England, to America, and to the civilized world—a contest between two kindred nations.

If American cities, along the coasts, were attracted by our fleets,—if Canadian insurgents were aided by border sympathizers,—if the formidable danger which results from a slave population of two millions, were hurried to a crisis,—if the trade of both countries were forcibly interrupted, it would but be a slight compensation, and it would be no excuse to either party, if the result were to secure the possession of a given number of square miles, north or south of the river of St John, and the establishment of the line of boundary contended for by one or other of the disputants. But we go farther ; for we much doubt whether the value of the State of Maine, or province of New-Brunswick, would be to either country an equivalent for the jealousy and the hatred, as well as the destruction of property, and the check

to all improvement, which must be the result of war. If this calamity has as yet been fortunately averted, we cannot help thinking that much is owing to the good sense and discretion manifested by the governor of New Brunswick, and the General commanding the troops of the United States.

Nothing can be more gratifying than the good feeling manifested on both sides in this military correspondence, which contrasts most favourably with the more polemical tone of the documents proceeding from too many of the civil authorities. Very just and impressive are the observations of the Marquis of Normanby, in his dispatch to Sir John Harvey, of 16th May 1839,—“ The correspondence between you and the Secretary of State, is honourable alike to you and to him. It is gratifying to observe, that the feelings of personal esteem which were established between General Scott and yourself, when formerly opposed to each other in the field, should, after the lapse of so many years, have enabled you both to concur in averting from your respective countries all the horrors of war.”

The peace of the American continent should, however, rest on a firmer foundation than the personal character of any two men, however



discreet and generous. The President, in his message of 1837, stated, "that time has brought a condition of affairs, in which the true interests of both countries imperatively require, that the question shall be set at rest." This is still more true in 1840, than at the date of this message. That the territory in dispute can be of no real importance to Maine, in a political point of view, is evident from the readiness manifested in 1832, to make the cession to the general government, on obtaining a pecuniary indemnity. To England, it is not for 10,000 square miles of territory that the controversy is maintained, but to secure freedom of intercourse between Fredericton and Quebec. This is a national object to us ; it is a most important object to America also ; for if the adjustment is not made, there can be no doubt but that future causes of dissension must arise.

In concluding these remarks on the Boundary Question, I would here observe, that the survey and demarcation of the boundary between the United States and the British Provinces of New-Brunswick and Canada, as defined by the treaty of Washington, have been advanced the past year (1841) with much industry and success. The commissioners, Messrs Featherston and Mudge, and the scientific corps, on the



part of both governments, (the latter composed chiefly of military engineers of the two services, who are graduates of the Natural Military Schools of Westpoint and Woolwich) have co-operated in the task committed to them, with great harmony. No controversy nor misunderstanding of any moment has arisen to that described in the treaty; and it is not at all probable that any doubt or difference of opinion can arise in the minds of the commissioners respecting the remainder of the line to be marked. The whole is clearly defined by the treaty, and both countries are represented in their commissioners, by intelligent, frank, and liberal-minded gentlemen, who are above any petty cavil in the discharge of their important duties.

The boundary has already been surveyed, and marked in such a way as to define the limits of jurisdiction of the respective governments, at the Monument, at the source of the river St Croix, and at the out-let of Lake Pokenagamook, on the river St Francis. No dispute as to the right of jurisdiction can therefore hereafter arise upon this important portion of our frontier. It embraces the whole of the Madawaska settlement, which is by far the most populous portion of the line, until it reaches the frontiers of Vermont and New-York. *Monuments*

of cast-iron have been erected through the whole of the line, at a distance of a mile apart.

The *termini* of the straight line between the out-let of the Lake of Pokenagamook, and the north-west branch of the St John, have been determined astronomically in lat. and lon., and the greater part of the river of the St John, above the mouth of the St Francis, has been also accurately surveyed.

The whole extent of the line to be run under the treaty, from the source of St Croix, around the State of Maine, along the northern line of Vermont, New Hampshire, and New York, is 950 miles in extent. The commissioners have surveyed the whole line as laid down by the treaty. They have to clear out a track thirty feet wide, making a vista through the forest, to survey all the islands in the St John's River,—to sound the channel of the river—to apportion the several islands to the two nations, and to make maps of the whole line. Cast-iron monuments, six feet long, half in and half out of the ground, with appropriate inscriptions, are to be placed along the line a mile apart, and as much oftener as a stream crosses the line. The line *has* been completed in this manner from the river St Croix to Lake Bohenagamook, a distance of over two hundred miles, at an expense

of 23,000 dollars, and it will require 75,000 dollars more to complete it. The commissioner and his party have worked this last summer, (1843) five months on the line. His party consisted of one principal commissioner, five topographical engineers (officers U.S.A.) three civil engineers, and one hundred men. The British had one commissioner (Col. Estcourt) three officers of the Royal Engineers, two civil engineers, a company of Sappers and Miners, acting as assistant engineers, besides labourers. The work at present is suspended for want of an appropriation.

#### EXTENT OF THE BRITISH TERRITORY.

The British territory in North America, is estimated to contain 2,369,000 square miles. Including the Indian countries, it extends from 42° to 47° N. lat., and from 55° 30' to 141° W. long. Its length from Cape Charles to the North Pacific is 3500 miles; and its length from Barrow's Strait to the Missouri territory is 2000 miles. The white population, in 1836, amounted to about one million and a-half.

The following are its chief divisions:—Hudson's Bay territories, including Labrador, Upp-

per Canada, Lower Canada, New-Brunswick, Nova Scotia. The islands are—Newfoundland, Cape Breton, Prince Edward, Bermudas, Anticosti, Southampton, North Georgian Islands.

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## POETRY.

WHAT'S deeper than the boundless sea,  
Where plunge the finny world?  
More dreadful than the belching crash  
From Etna's entrail's hurl'd?—REVENGE.

What's softer than the cygnet's down—  
Or dew upon the rose—  
Or changing tissue of the west  
At evening's peaceful close?—PITY.

What's more impetuous than the rage  
That sweeps Nigara's surge?  
More sure to push the victims on,  
That loiter near its verge?—ANGER.

What's milder than the gentle touch  
Of Zephyr's kindly blow?  
*Or lake reflected Cynthia's orb*  
*Beneath its surface shewn?*—RELIGION.

What's more bitter far than gall,  
Or wormwood's loathsome blade ?  
More poisonous than the fang of asps,  
Or Upaz baleful shade ?—ENVY.

What's truer than the magnet's aim,  
To north so steady borne ?  
That quiet rests when undisturb'd,  
That trembles when it's torn ?—FRIENDSHIP.

What wilder than the timid deer,  
That bounds the leafy lair ?  
Or proud fledged ospray's boldest flight,  
Along the yielding air ?—FANCY.

What's broader than the starry cope,  
Or than unbounded space ?  
Or more expansive than the air,  
On which is left no trace ?  
More bright than yon resplendent sun,  
With wide prolific rays ;  
Pervading more the cheerless heart,  
Than He, the argent day ?—CHARITY.—C. W. A.

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HAIL ! to thee New-Brunswick !  
Thou cherish'd land of ours ;  
Our sons are like the granite rocks—  
Our daughters like the flowers.

The land of rock, and mount, and glen,  
Of noble streams that sweep  
Through vallies rich with verdure,  
In gladness to the deep.

The towering spruce, and ancient pine,  
Our noble forest bear,  
The maple bough, its blossoms,  
Flings on the scented air.

No despot monarch wrings our toil,  
Or rends its fruit away ;  
The flocks upon our own green hills  
Secure from plunder stray.

We quail to none—of none we crave—  
Or bend the servile knee ;  
The life-blood that our fathers gave,  
Still warms the firm and free.

Free as the white gull spreads her wings,  
We own no tyrant's rod—  
No Sovereign, but our youthful QUEEN !  
Our country and our GOD !—C. W. A.



## RELIGION SUPREME.

VICTOR, what avails the wreath  
That erst entwined thy brow?  
Alas! these flowers no longer breathe,  
For death hath laid them low.

And what avails the storied urn  
That blazons forth thy fame?  
That sculptur'd vase to dust shall turn—  
Oblivion blot thy name.

What, too, avails those scars so deep,  
Received in battle fray?  
They're proofs of valour! Time shall sweep  
Thy valour's proofs away!

And what avails the minstrel's song,  
That sounds thy praises forth?  
The minstrel's head shall rest ere long,  
Upon the lap of earth.

Avarice, what avails thy dreams  
Of happiness in gold?  
Thy funeral torch already gleams—  
Thy days on earth are told.

What now avails the hoarded wealth?  
Is it with thee inurned?—  
No—"Naked from the earth you came,  
And naked have returned."

Beauty! what avails the rose  
That decks thy dimpl'd cheek?  
Age on thy head shall strew his snows,  
And death his vengeance wreak.

And what avails thy form so fair,  
Or eyes so dazzling bright?  
That form shall waste in sullen care—  
Those suns shall set in night.

But, blest RELIGION, much avails  
Thy hope of bliss in heaven;  
For though thy barque by adverse gales  
On death's dark shore be driven,  
Still thou canst smile! thy steady eye  
Can pierce the cheerless gloom,  
And view through dark futurity,  
The day-spring of the tomb.—C. W. A.

## PEACE.

SEE where she stoops from yonder snowy cloud,  
Rich sun-light streaming from her waving wings;  
Hark to the Pœans of the leaping crowd,  
Who throng to grasp the priceless gifts she  
brings,—  
Where'er she sets her foot, sweet verdure springs.  
Scarce wins the reaper thro' the bending grain,  
Thick to the vine the cluster'd fruitage clings;  
Glad sings the peasant to the groaning wain,  
And to the lip of love bright smile comes again.

C. W. A.



APPENDIX.

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IN New-Brunswick, besides coal and iron, there are copper, tin, lead, zinc, and manganese, which should claim some attention, and although but small quantities of the precious metals have been found, several of the most beautiful gems have been discovered in this, and the adjoining Province, (Nova Scotia.) In the mineral kingdom lie the hidden properties of magnetism and electricity, with all those chemical phenomena now so well known, but whose true causes are but imperfectly understood. The former guides the wandering mariner over the pathless ocean, and the latter delights us by its extraordinary effects. A combination of these two properties is now directed, so as to be made obedient to the human will, and, from a knowledge of their laws, a power has been obtained similar to that produced by steam. In all these, the design, wisdom, and beneficence of an intelligent Architect are displayed in a manner so nicely adapted to human comprehension, that none who inquires into them, can forbear to acknowledge the power and goodness of their Creator.

It would be in vain to attempt an enumeration of all the different mineral substances which have proved useful to mankind—their uses are as wide as the field from whence they are taken, and the welfare of any country must, in a great measure, depend upon the native riches contained in its rocks, and success can only attend that industry which is devoted to the legitimate objects of national wealth and dependence.

It should be here remarked, that all the iron, copper, lead, tin, zinc, and manganese, and other metals also used by the inhabitants of this Province, are imported directly from Great Britain, or some foreign port. Most of those metals exist in the country, and might be manufactured at a cheaper rate than they can be purchased at, and conveyed from any other place.

The large quantities of timber shipped annually from the Province, are insufficient to meet the amount of imposts, and the country sends abroad an article which other countries have not, to purchase articles which she possesses. The result of such an economy must be readily perceived, and if not remedied by calling forth her own mineral supplies, must terminate greatly to the disadvantage of the colony.

Were the coal raised, and the iron and copper manufactured in the Province in a sufficient quantity to supply its own wants, then the amount of these necessary articles would be saved to the country—the reward to honest industry would be certain, and emigration would be encouraged. But the more immediate means of supply, namely, timber and deals, are



now required to balance with the importations, and when these means fail, (and fail they will in time) and great loss has been sustained, will every object capable of producing relief be resorted to ; whereas, had they been used at an earlier day, the general prosperity would have been as steady as it now may be great.

The histories of ancient and modern nations shew how much the civilization and happiness of mankind rest upon national resources, and the fate of empires depend upon those stores of mineral matter laid up in the earth's vast warehouse ; these stores shew their intended use, and the care and foresight of a superintending Power, which has abundantly provided for all the wants of the human family.

Like Nova Scotia, New-Brunswick possesses the greatest riches of the mineral kingdom ; but while all the best resources of the former are held in durance by an association whose interest is best supported by a partial and limited developement of her mines, the latter is free from that embarrassment, and her inhabitants can participate in the benefits to be derived from them. While the mines and minerals of Nova Scotia are placed beyond the reach of provincial legislation, those of New-Brunswick can be rendered profitable to the revenue and to the people.

Along the broken and desolate district, extending from the mountains of the Nerepis to the American boundary, the feldspathic, and hornblende trap forms lofty, abrupt, and often inaccessible cliffs ; and the sublime appearance of this chain of mountains, admirably displays the ingenious character of its rocks.

The remains of ancient craters that have out-lived the destructive operations of the elements, are still visible, and fill the mind with the highest veneration. This mountain scenery is rendered still more wild by the depth and silence of its valleys, and the succession of pyramid after pyramid, rising as far in the distance as the eye can behold ; their bright tops seen glittering in the mid-day sun, seem like beacons hung over the dark ravines, and winding hollows, mantled with the thickest spruce, and inhabited only by the sullen bear and bounding deer.

FINIS.

